Index

Roofing • 5 •

Metal Roofing Systems/Cold Process Systems • 120 •

Dampproofing • 148 •

Waterproofing • 176 •

Sealants, Caulking, Flooring • 186 •

Fabrics • 206 •

Guide Specifications • 212 •

Miscellaneous • 220 •

Notes • 224 •
**Product Index**

**ROOFING PRODUCTS**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>#13</td>
<td>Plastic Cement</td>
<td>5</td>
</tr>
<tr>
<td>#15</td>
<td>Smooth MUCK®</td>
<td>7</td>
</tr>
<tr>
<td>#16</td>
<td>Double Coverage Cement</td>
<td>9</td>
</tr>
<tr>
<td>#18</td>
<td>Perfectseal Flashing Cement</td>
<td>10</td>
</tr>
<tr>
<td>#19</td>
<td>Flashing Cement</td>
<td>12</td>
</tr>
<tr>
<td>#19</td>
<td>Ultra Rubberized Flashing Cement</td>
<td>14</td>
</tr>
<tr>
<td>#27</td>
<td>Fibered Perfectseal Aluminum</td>
<td>17</td>
</tr>
<tr>
<td>#28</td>
<td>Non-Fibered Perfectseal Aluminum</td>
<td>20</td>
</tr>
<tr>
<td>#29</td>
<td>Perfectseal Quick-Grip Modified Bitumen Adhesive</td>
<td>23</td>
</tr>
<tr>
<td>#45</td>
<td>Sky-Kote</td>
<td>25</td>
</tr>
<tr>
<td>#66</td>
<td>Modified Bitumen Adhesive</td>
<td>27</td>
</tr>
<tr>
<td>#71</td>
<td>Fibered Asphalt Coating</td>
<td>29</td>
</tr>
<tr>
<td>#78</td>
<td>Cold Process Cement</td>
<td>31</td>
</tr>
<tr>
<td>#81</td>
<td>Modified Bitumen Adhesive</td>
<td>32</td>
</tr>
<tr>
<td>#89</td>
<td>Sta-Tack Primer</td>
<td>35</td>
</tr>
<tr>
<td>#97</td>
<td>Fibered Aluminum Coating</td>
<td>36</td>
</tr>
<tr>
<td>#98</td>
<td>Fibered Aluminum Coating</td>
<td>39</td>
</tr>
<tr>
<td>#100</td>
<td>Non-Fibered Emulsion Primer</td>
<td>42</td>
</tr>
<tr>
<td>#107</td>
<td>Velvet Roof Coating</td>
<td>44</td>
</tr>
<tr>
<td>#108</td>
<td>Asphalt Primer (ASTM D-41)</td>
<td>46</td>
</tr>
<tr>
<td>#155</td>
<td>Amphibikote (wet-dry)</td>
<td>48</td>
</tr>
<tr>
<td>#168</td>
<td>Tar Roof Resaturant</td>
<td>50</td>
</tr>
<tr>
<td>#169</td>
<td>Non-Fibered Aluminum</td>
<td>52</td>
</tr>
<tr>
<td>#170</td>
<td>Tar Cement</td>
<td>55</td>
</tr>
<tr>
<td>#180</td>
<td>Karna-Sil Epoxy Primer</td>
<td>57</td>
</tr>
<tr>
<td>#197</td>
<td>Karnastatic Cement</td>
<td>60</td>
</tr>
<tr>
<td>#198</td>
<td>Asphalt Roof Resaturant</td>
<td>62</td>
</tr>
<tr>
<td>#220</td>
<td>Emulsion Roof Coating</td>
<td>64</td>
</tr>
<tr>
<td>#229AR</td>
<td>Elastomeric</td>
<td>66</td>
</tr>
<tr>
<td>#297</td>
<td>Aqua-Lum Aluminum Emulsion Coating</td>
<td>69</td>
</tr>
<tr>
<td>#298</td>
<td>Alumin-R</td>
<td>72</td>
</tr>
<tr>
<td>#404</td>
<td>Corrosion Proof</td>
<td>75</td>
</tr>
<tr>
<td>#405</td>
<td>Bond-N-Shield</td>
<td>77</td>
</tr>
<tr>
<td>#406</td>
<td>Tru-Grip</td>
<td>80</td>
</tr>
<tr>
<td>#407</td>
<td>EPDM &amp; SPF</td>
<td>83</td>
</tr>
<tr>
<td>#501</td>
<td>Elasto-Brite</td>
<td>85</td>
</tr>
<tr>
<td>#502</td>
<td>RC-W Elasto-Kote (base &amp; finish)</td>
<td>88</td>
</tr>
<tr>
<td>#505HS</td>
<td>Mohave Coat</td>
<td>90</td>
</tr>
<tr>
<td>#505</td>
<td>Karna-Flex WB</td>
<td>92</td>
</tr>
<tr>
<td>#502</td>
<td>Karna-Flex</td>
<td>95</td>
</tr>
<tr>
<td>#507</td>
<td>SPC Primer/Wash</td>
<td>98</td>
</tr>
<tr>
<td>#529</td>
<td>Renu White</td>
<td>100</td>
</tr>
</tbody>
</table>
# Product Index

## METAL ROOFING SYSTEMS/COLD PROCESS SYSTEMS
- #229AR/298 Alumin-R Metal Roof Restoration System ........................................ 120
- #229AR Elastomeric .......................................................................................... 122
- #298 Alumin-R .................................................................................................. 125
- #502 RC-W Elasto Kote Metal Roof Restoration System ................................. 128
- #502 Karna Flex ............................................................................................... 131
- #502 RC-W Elasto-Kote (base & finish) ............................................................. 134
- #535 QS Enviro-Lastic Metal Roof Restoration System .................................. 136
- #505 Karna-Flex WB ....................................................................................... 138
- #404 Corrosion Proof ....................................................................................... 141
- #535 QS Enviro-Lastic ....................................................................................... 143
- #220 Cold Process System .............................................................................. 145

## DAMPROOFING
- Waterproofing and Dampproofing Products .................................................... 148
- #LL10 & LL20 Water Repellents ........................................................................ 153
- #83 Fibered Dampproofing .............................................................................. 156
- #86 Fibered Trowel Mastic ............................................................................... 158
- #100 Non-Fibered Emulsion ............................................................................ 160
- #102 Asphalt Primer .......................................................................................... 163
- #108 Asphalt Primer ASTM D-41 .................................................................... 165
- #112 Foundation Coating .................................................................................. 167
- #118 Black Asphaltum ...................................................................................... 169
- #220 Fibered Emulsion ...................................................................................... 171
- #920 Fibered Emulsion Mastic (trowel grade) .................................................... 173

## WATERPROOFING
- #88R Rubberized Waterproofing ....................................................................... 176
- #192 One-Kote ................................................................................................ 179
- #229AR Elastomeric .......................................................................................... 183

## SEALANTS, CAULKING & FLOORING
- #19 Ultra Rubberized Asphalt Caulk .................................................................. 186
- #41 WEB-Caulk ................................................................................................ 189
- #44 Klear Seal Caulk .......................................................................................... 191
- #79 Wood Block Mastic ...................................................................................... 194
Product Index

#105 Tac-Kote ........................................................................196
#160.1 Amphibicaulk .............................................................197
#229AR Elastocaulk .............................................................200
#502 Karna-Flex Caulk ..........................................................201
#230-2% Neo-Asphalt (trowel grade) ......................................203
#237-2% Neo-Asphalt (brush grade) ......................................204

FABRICS
#31 Fiberglass Membrane ......................................................206
#34 Utility Grade Cotton Fabric ..............................................207
#3036 Poly-Mat .....................................................................208
#5540 Resat-Mat ..................................................................210

GUIDE-SPECIFICATIONS
#229AR Elastomeric .............................................................212
Application Guidelines ........................................................217
Temperature Recommendations .........................................223

MISCELLANEOUS
#709 Karna Klean ..............................................................219
#799 Wash-N-Prep ..............................................................221
DESCRIPTION:
Karnak 13 Plastic Cement is a scientifically compounded composition of selected asphalts, mineral fillers and refined solvents that are manufactured to a heavy consistency for application by trowel to provide a durable, elastic coating of excellent adhesion and high resistance to water and weathering. This product, when applied dries to a tough, flexible, waterproof and corrosion proof coating, which gives excellent performance over wide ranges of temperature and weather conditions. Karnak 13 Plastic Cement is available in 2 consistencies: Summer and Winter Grade.

USES:
Karnak 13 Plastic Cement is a general-purpose cement for repairing leaks in shingles, concrete, metal or asphalt roofs, flashings on walls, chimneys, flues, downspouts and cornices. Excellent for sealing cracks in concrete, brick, as a joint filler for pre-cast roof slabs and general purpose use in maintenance of exposed buildings and structures.

SURFACE PREPARATION:
All surfaces should be dry, clean and free from oil or grease, dust, dirt, loose paint or other foreign matter.

APPLICATION:
Spread Karnak 13 Plastic Cement to an average thickness of 1/8” (approximately 8 gallons per square) and press tightly into joints, seams or cracks. To repair large cracks, breaks and blisters, spread Karnak 13 Plastic Cement over the damaged area then embed Karnak Cotton, Fiberglass or Polyester membrane reinforcement and then apply another layer of 13 Plastic Cement over the entire patch.

SPECIFICATIONS:
ASTM D-4586 Type I Class I
Federal Specification SS-C-153 Type I (Non-Asbestos)

PHYSICAL PROPERTIES:
1. Consistency: A smooth, heavy trowel consistency that will readily spread on and adhere to most all surfaces without sagging.
2. Character of Dried Film: Uniform, excellent adhesion to masonry, steel, slab insulation and other surfaces.
3. The dried film retains its flexibility and ductility so that the coating will resist extreme variations in temperature and weather.
4. Has excellent resistance to flow at high temperatures when used on a vertical surface.
Roofing

Read Material Safety Data Sheets before using this product.

13 Plastic Cement

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits or petroleum solvents, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails.

CAUTION:

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Smooth MUCK® asphalt flashing cement is composed of selected crude asphalts, asbestos-free fibers and refined solvents that dries to a tough waterproof coating. Use to seal leaks on asphalt roofs, concrete and metal roofs, shingles, gutters, downspouts, around chimneys, flues and skylights as well as for general purpose use in the maintenance of all exposed building and structures. Available in three consistencies: Summer, Semi and Winter.

**PRODUCT FEATURES:**
- Smooth trowel grade consistency
- Tough waterproof film
- Won’t run or sag on vertical surfaces

**USES:**
Smooth MUCK® is a general purpose flashing cement for repairing and sealing leaks on asphalt roofs, concrete and metal roofs, shingles, gutters, downspouts, around chimneys, flues and skylights as well as for general purpose use in the maintenance of all exposed building and structures.

**SURFACE PREPARATION:**
All surfaces to be sealed must be clean, dry and free from oil or grease, dirt, dust and other foreign matter.

**APPLICATION:**
Trowel Smooth MUCK® to an average thickness of 1/8” (approximately 8 gallons per square) and press tightly into joints, seams or cracks. To repair large cracks, breaks and blisters, embed either asphalt cotton or fiberglass membrane between two application of Smooth MUCK® over the damaged area.

**PRODUCT SPECIFICATIONS:**
ASTM D-4586, Type I, Class I
Federal Specification SS-C-153 Type I (Non-Asbestos)
CAUTION:
Do not use near heat or open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. Do not thin. Dispose of in an environmentally safe manner. Avoid getting in eyes. Use only with adequate ventilation. Cover air intakes during application and while drying.

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits or petroleum solvents, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak #16 Double Coverage Cement is manufactured from a blend of selected asphalts, mineral fillers and refined solvents. This composition is then passed through a high speed mixer which provides a smooth consistency product, free of foreign matter and lumps.

**USES:**
1. Lap cement
2. Rolled roofing adhesive
3. Blind nailing cement

**SURFACE PREPARATION:**
The area to be coated must be free and clean of all debris, dust and dirt.

**COVERAGE:**
Under normal conditions, Karnak #16 Double Coverage Cement should be applied at the rate of 2 to 3 gallons per 100 sq. ft.

**SPECIFICATIONS:**
ASTM D-3019 Type III

**CAUTION:**

**CARE OF TOOLS:**
Tools may be thoroughly cleaned after use with mineral spirits or petroleum solvents, taking the due precautions necessary when handling combustible materials.

**PACKAGING:**
Available in 5 gallon pails and 1 gallon pails.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

18 Perfectseal Flashing Cement (Asbestos-free)

DESCRIPTION:
Karnak #18 Perfectseal Flashing Cement is a scientifically compounded composition of selected asphalts, mineral fibers, and refined solvents that are manufactured to a heavy consistency. Designed for application by trowel #18 is a durable cement with excellent adhesion and weathering characteristics. This product when applied dry to a tough, flexible, water resistant and corrosion proof coating that provides excellent performance over a wide range of temperature and weather conditions. Available in three consistencies: Summer, Semi and Winter.

USES:
Karnak #18 Perfectseal Flashing Cement is a general purpose cement for repairing leaks in shingles, concrete, metal or asphalt roofs, flashings on walls, chimneys, flues, downspouts and cornices. Excellent for sealing cracks in concrete, brick, as a joint filler for pre-cast roof slabs and general purpose use in maintenance of exposed buildings and structures.

SURFACE PREPARATION:
All surfaces should be clean, dry and free from oil or grease, dust, dirt, loose paint or other foreign matter prior to application.

APPLICATION:
Spread Karnak #18 Perfectseal Flashing Cement to an average thickness of 1/8” (approximately 8 gallons per square) and press tightly into joints, seams or cracks. To repair large cracks, breaks and blisters, spread Karnak #18 Perfectseal Roof Cement over the damaged area, then embed Karnak Cotton, Glass or Poly-Mat Membrane reinforcement and then apply another coat of Karnak #18 Perfectseal Roof Cement over the entire patch.

PRODUCT SPECIFICATIONS:
ASTM D-4586, Type I Class I
Fed. Spec. SS-C-153 Type 1 (except non-Asbestos)
PHYSICAL PROPERTIES:
1. Consistency: A smooth, heavy trowel consistency which will readily spread on and adhere to surfaces without sagging.

2. Character of Dried Film: Uniform, excellent adhesion to masonry, steel, cured concrete, shingles, asphalt roofing and a variety of other surfaces.

3. Has excellent resistance to flow at high temperatures when used on a vertical surface.

CAUTION:
Do not use near heat or open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, **do not induce vomiting**. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. **Do not thin.** Dispose of in an environmentally safe manner. Avoid getting in eyes. Use only with adequate ventilation. Cover air intakes during application and while drying.

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits or petroleum solvents, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 3 gallon buckets.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Roofing

Read Material Safety Data Sheets before using this product.

19 Flashing Cement

DESCRIPTION:
Karnak #19 Flashing Cement is a scientifically compounded composition of selected asphalts, mineral fibers, and refined solvents that are manufactured to a heavy consistency for application by trowel to provide a durable, elastic coating of excellent adhesion and high resistance to water and weathering. This product dries to a tough, flexible, waterproof and corrosion proof coating which gives excellent performance over wide ranges of temperature and weather conditions. Karnak #19 Flashing Cement is available in 3 consistencies: Summer, Semi and Winter.

USES:
Karnak #19 Flashing Cement is a general purpose cement for repairing leaks in shingles, concrete, metal or asphalt roofs, flashings on walls, chimneys, flues, downspouts and cornices. It is excellent for sealing cracks in concrete and brick, as a joint filler for precast roof slabs and for general purpose use in maintenance of exposed buildings and structures.

SURFACE PREPARATION:
All surfaces should be clean, dry and free from oil or grease, dust, dirt, loose paint or other foreign matter.

APPLICATION:
Spread Karnak #19 Flashing Cement to an average thickness of 1/8” (approximately 8 gallons per square) and press tightly into joints, seams or cracks. To repair large cracks, breaks and blisters:

1. Spread Karnak #19 Flashing Cement over the damaged area.
2. Embed Karnak Cotton, Fiberglass or Poly-Mat Membrane reinforcement.
3. Apply another coat of Karnak #19 Flashing Cement over the entire patch.

SPECIFICATIONS:
Federal Specification SS-C-153 Type I (Except Non-Asbestos)
ASTM D-4586 Type I Class I
ASTM D-3409
19 Flashing Cement

PHYSICAL PROPERTIES:

1. Consistency: A smooth, heavy trowel consistency which will readily spread on and adhere to vertical and horizontal surfaces without sagging.

2. Character of Dried Film: Uniform, excellent adhesion to masonry, steel, cured concrete, shingles, asphalt roofing and a variety of other surfaces.

3. The dried film retains its flexibility and ductility so that the coating will resist extreme variations in temperature and weather.

4. Has excellent resistance to flow at high temperatures when used on a vertical surface.

CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails, 3 gallon buckets and 1 gallon cans.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak #19 Ultra Flashing Cement is the next generation asbestos-free elastomeric flashing cement. Scientifically compounded with a selection of rubber reinforced asphalt, mineral fibers, and refined solvents. Karnak #19 Ultra is manufactured to a heavy pliable consistency for ease of application by trowel. #19 Ultra provides a durable elastomeric coating of greater strength, excellent adhesion and high resistance to water and weathering.

Karnak #19 Ultra is composed of special chemical ingredients which give it a unique water displacement quality (Wet/Dry). Karnak #19 Ultra dries to a tough, flexible, waterproof and corrosion proof rubber coating which gives maximum protection and excellent performance over wide ranges of temperature and weather conditions. Karnak #19 Ultra is available in 3 consistencies: Summer, Semi and Winter.

FEATURES, BENEFITS AND ADVANTAGES:
• Rubberized - elastomeric
• Wet or dry application
• Improved low-temperature flexibility
• Improved water and weather resistance
• Will not shrink or crack
• Smooth, easy to apply rubber-like trowel consistency
• Excellent adhesion
• Excellent resistance to flow (sag) at high roof temperatures
• Ready to apply - no mixing required
• Greater strength
• Cures faster than regular flashing cements
• VOC compliant
• ASTM compliant
• Sticks under water the first time.
• Can be used with fiberglass membrane under water.

USES:
Karnak #19 Ultra Flashing Cement is a general purpose asbestos-free flashing cement for repairing leaks in shingles, concrete, metal or asphalt roofs, SBS and APP modified bitumen membranes flashings on walls, chimneys, flues, skylight flashings, downspouts and cornices.

Karnak #19 Ultra is excellent for sealing cracks in concrete and brick, as a joint
filler for precast roof slabs, for repair, patch and flashing detail on SBS and APP modified membranes, and for general purpose use in maintenance of exposed buildings and structures.

SURFACE PREPARATION:
All surfaces should be clean, dry and free from oil, grease, dust, dirt, loose paint or other foreign matter. Excess water should be removed, if possible, before application of #19 Ultra.

APPLICATION:
Spread Karnak #19 Ultra Flashing Cement to an average thickness of 1/8” (approximately 8 gallons per square) and press tightly into joints, seams or cracks.

TO REPAIR CRACKS, BREAKS AND BLISTERS:
1. Spread Karnak #19 Ultra Flashing Cement over the damaged area at an average thickness of 1/8”.
2. Embed Karnak Cotton, Glass or Polyester Membrane reinforcement in the #19 Ultra Flashing Cement.
3. Apply an additional coat of Karnak #19 Ultra Flashing Cement over the entire patch at an average thickness of 1/8”.

SPECIFICATIONS:
ASTM D-4586 Type I Class I & Class II
ASTM D-3409
Fed Spec SS-C-153 Type I (Asbestos-Free)

PHYSICAL PROPERTIES:
1. Consistency: A smooth rubber-like trowel consistency which will readily spread on and adhere to vertical and horizontal surfaces without sagging.
2. Character of Dried Film: Excellent adhesion to masonry, steel, cured concrete, shingles, asphalt roofing, skylight flashings and a variety of other surfaces.
3. Film Performance Characteristics: The dried film retains its elasticity and ductility so that the material will resist extreme variations in temperature and weather.
5. Homogenized: Thoroughly mixed and consistent throughout.
6. Consistency: 19 Ultra is always smooth and of a trowel consistency.
CAUTION:
Combustible Mixture: do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, **do not induce vomiting**. Call a physical immediately.

Keep out of reach of children. Keep container covered when not in use. **Do not thin**. Consult MSDS for further safety precautions. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials. To clean hands use #709 Karnak Karna-Klean or a waterless hand cleaner.

PACKAGING:
Available in 1 gallon cans, 3 gallon buckets, 5 gallon pails and 10.1 oz. cartridges.

*If further information is needed, contact Karnak Technical Services at 1-800-526-4236.*

Please see page 222 for additional mold and safety information.
27 Fibered Perfectseal Aluminum Exterior Coating

DESCRIPTION:
Karnak #27 Fibered Perfectseal Aluminum Exterior Coating is made of selected asphalts and pigment flakes of pure aluminum, blended with petroleum solvents and mineral fibers. When Karnak #27 Fibered Perfectseal Aluminum Exterior Coating is applied to the roof, the aluminum flakes leaf to the surface, forming a reflective, metallic shield over the base material.

The advantages of this metallic aluminum shield are twofold:

A. The asphaltic oils in the base coating are protected from harmful intense rays of the sun by the reflective properties of the aluminum. Over 50% of the sun’s rays are reflected by this aluminum shield, thereby preventing these oils from being “cooked” out of the base coating. The coating, therefore, retains its resilient characteristics and will not prematurely crack or dry out.

B. During the hot summer months, Karnak #27 Fibered Perfectseal Aluminum Exterior Coating will help reduce indoor building temperatures and improve inside living and working conditions. Karnak #27 Fibered Perfectseal Aluminum Exterior Coating prevents the sun’s rays from penetrating the roof coating and passing the heat into the building interior.

The combination of these protective materials - aluminum, asphalt and reinforcing fibers - by the exclusive Karnak process results in a self-protecting roof coating with longer-lasting heat resistant features. Karnak #27 Fibered Perfectseal Aluminum Exterior Coating remains tenaciously bonded to the base material, thus assuring longer roof life, with subsequent savings on roof maintenance.

SURFACE PREPARATION:
All surfaces should be clean, dry and free of dust, dirt, oil and other foreign matter. Repair all cracks and blisters. New BUR asphalt roof surfaces should weather a minimum of 180 days before being coated with Karnak #27 Fibered Perfectseal Aluminum Exterior Coating. However, Karnak #27 Fibered Perfectseal Aluminum Exterior Coating can be coated on roofs 3 to 5 days after Karnak asphalt emulsions have been applied. Badly weathered or alligatored asphalt surfaces should be primed with Karnak 100 Non-Fibered Emulsion or 220 Fibered Emulsion prior to coating with 27 Fibered Aluminum Coating. Allow emulsion primer to cure a minimum of 3-5 days before application of aluminum coating.
27 Fibered Perfectseal Aluminum Exterior Coating

APPLICATION:
Karnak #27 Fibered Perfectseal Aluminum Exterior Coating should be spread uniformly over the roof surface. Care should be taken not to overwork the coating during application. This could have a damaging effect on the leafing of the aluminum. Pour the correct amount of aluminum coating to cover a given area and apply uniformly. Be sure to mechanically mix the aluminum coating thoroughly before using. Karnak #27 Fibered Perfectseal Aluminum Exterior Coating can be applied with a soft roof brush, roller or spray.

COVERAGE:
Apply at the rate of 1 to 1.5 gallons per 100 sq. ft.

SPECIFICATIONS:
ASTM D-2824 Type III

Note: Coating Modified Bitumen Membranes with Aluminum Coatings
Karnak recommends coating torch-applied modified bitumen membranes as soon as possible after the membrane is installed.

Karnak’s experience, laboratory and field tests, as well as NRCA, RCMA and ARMA reports, indicate that aluminum coating will reduce the combined effects of ultraviolet rays, heat and moisture, which, especially on APP modified bitumens, enhance exudation that can cause discoloring and delamination of any surface coating. After 60 days, recommended application temperatures are 50° Fahrenheit and rising. Must not come in contact with any type of moisture within 24-48 hours after application.

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”
CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned after use with mineral spirits or petroleum solvents, taking the necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is required, please contact Karnak’s Technical Service Department at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

28 Non-Fibered Perfectseal Aluminum Roof Coating

DESCRIPTION:
Karnak #28 Non-Fibered Perfectseal Aluminum Roof Coating is made of selected asphalts and pigment flakes of pure aluminum blended with petroleum solvents and mineral fillers. When Karnak #28 Non-Fibered Perfectseal Aluminum Coating is applied to the roof, the aluminum flakes leaf to the surface, forming a reflective, metallic shield over the base material.

The advantages of this metallic aluminum shield are twofold:

A. The asphaltic oils in the base coating are protected from harmful intense rays of the sun by the reflective properties of the aluminum. Over 50% of the sun’s rays are reflected by this aluminum shield, thereby preventing these oils from being “cooked” out of the base coating. The coating, therefore, retains its resilient characteristics and will not prematurely crack or dry out.

B. During the hot summer months, Karnak #28 Non-Fibered Perfectseal Aluminum Coating will help reduce indoor building temperatures and improve inside living and working conditions. Karnak #28 Non-Fibered Perfectseal Aluminum Roof Coating prevents the sun’s rays from penetrating the roof coating and passing the heat into the building interior.

The combination of these protective materials - aluminum and asphalt, by the exclusive Karnak process - results in a self-protecting roof coating with longer-lasting heat resistant features. Karnak #28 Non-Fibered Perfectseal Aluminum Coating remains tenaciously bonded to the base material, thus assuring longer roof life with subsequent saving on roof maintenance.

APPLICATION:
Karnak #28 Non-Fibered Perfectseal Aluminum Roof Coating should be spread uniformly over the roof surface. Care should be taken not to overwork the coating during application. This could have a damaging effect on the leafing of the aluminum. Pour the correct amount of aluminum coating to cover a given area and apply uniformly.

Be sure to mechanically mix the aluminum coating thoroughly before using. Karnak #28 Non-Fibered Perfectseal Aluminum Coating can be applied with a soft roof brush, roller or spray.
**SURFACE PREPARATION:**
All surfaces should be clean, dry and free from oil or grease, dust, dirt, loose paint or other foreign matter prior to application. Repair all cracks and blisters. New BUR asphalt roof surfaces should weather a minimum of 180 days before being coated with Karnak #28 Non-Fibered Perfectseal Aluminum Roof Coating. However, Karnak #28 Non-Fibered Perfectseal Aluminum Coating can be coated on roofs 3 to 5 days after Karnak asphalt emulsions have been applied. Badly weathered or alligatoed asphalt surfaces should be primed with Karnak 100 Non-Fibered Emulsion or 220 Fibered Emulsion prior to coating with 28 Non-Fibered Aluminum Coating. Allow emulsion primer to cure a minimum of 3-5 days before application of aluminum coating.

**COVERAGE:**
Apply at the rate of 0.5 to 1 gallon per 100 sq. ft.

**SPECIFICATIONS:**
ASTM D-2824 Type I

**Note: Coating Modified Bitumen Membranes with Aluminum Coatings**
Karnak recommends coating modified bitumen membranes as soon as possible after the membrane is installed.

Karnak’s experience, laboratory and field tests, as well as NRCA, RCMA and ARMA reports indicate that aluminum coating will reduce the combined effects of ultraviolet rays, heat and moisture, which, especially on APP modified bitumens, enhance exudation that can cause discoloring and delamination of any surface coating. After 60 days, recommended application temperatures are 50°F Fahrenheit and rising. Must not come in contact with any type of moisture within 24-48 hours after application.

**COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.**

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”
Read Material Safety Data Sheets before using this product.

28 Non-Fibered Perfectseal Aluminum Roof Coating

CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned after use with mineral spirits, taking the necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is required, please contact Karnak’s Technical Service Department at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak 29 Perfectseal Quick-Grip Modified Adhesive Brush Grade is a multi-purpose, SBS polymer modified bitumen, cold-process adhesive. This economical and useful adhesive is designed to provide greater bonding strength.

**USES:**
**Trowel Grade:**
Designed as an adhesive for SBS modified bitumen single-ply membranes. Flashing vertical surfaces, skylights, vents and pipes (Not for use around heated vents or pipes).

**Brush Grade:**
Designed as an adhesive for SBS modified bitumen single-ply membranes. Also may be used to adhere conventional roll roofing membranes and granular cap sheets.

**APPLICATION:**
**Trowel Grade:**
Surface must be dry, clean and free of oil, grease, dust, dirt and all materials that might interfere with the adhesive bond. Apply Karnak 29 Perfectseal Quick-Grip Trowel Grade on surfaces at a 1/8” thickness, as determined by the irregularity and absorptive nature of the surface. Excessive use may create blistering. A 1/4” serrated trowel is the recommended application tool. Overlaps should be at least 4” wide. Allow an open time of 15-20 minutes before placing membrane into adhesive.

**Brush Grade:**
Surface must be dry, clean and free of oil, grease, dust, dirt and all materials that might interfere with the adhesive bond. Apply Karnak 29 Perfectseal Quick-Grip Brush Grade at the rate of 1 to 2 gallons per 100 sq.ft. on horizontal surfaces, as determined by the irregularity and absorptive nature of the surface. Excessive use may create blistering. A rubber squeegee, brush or roller is the recommended application tool. Overlaps should be at least 4” wide. Allow an open time of 15-20 minutes before placing membrane into adhesive.

**CAUTION:** Combustible Mixture. Do not use near fire or flame.
KEEP OUT OF REACH OF CHILDREN. Do not thin.

**CARE OF TOOLS:**
Equipment may be thoroughly cleaned after use with Karna-Klean or mineral spirits, taking necessary precautions when handling combustible materials.
WARNING: Keep away from open flame. Keep container closed when not in use. Avoid prolonged or repeated contact with skin or eyes. If splashed in eyes, flush immediately with copious quantities of running water. Do not take internally. If swallowed, do not induce vomiting; call a physician immediately. Use with adequate ventilation. Provide adequate ventilation in confined areas during application. Vapors can cause headaches, nausea, dizziness and irritation of the respiratory tract, or unconsciousness. Wash exposed areas promptly and thoroughly after skin contact and before eating, drinking or using tobacco products. Prior to using this product it is necessary to read and understand the MSDS which is available from your employer or by calling the Karnak Technical Sales office at 1-800-526-4236. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak 45 Sky-Kote is a 100% acrylic based elastomeric coating. It exhibits exceptional exterior durability, UV stability and superior flexibility in low temperature environments. 45 Sky-Kote dries to a clear, flexible tuff film.

FEATURES, BENEFITS AND ADVANTAGES:
• Easy to apply.
• Quick dry to a water translucent film.
• Will seal scratches and small cracks.
• Hydrophobic water beading film.
• Excellent adhesion.
• Tough, durable film.

USES:
Karnak 45 Sky-Kote is designed for sealing and protecting skylight panels or glass transit windows. 45 Sky-Kote economically provides a quality watertight seal that allows light to pass through.

SURFACE PREPARATION:
All areas to be coated must be clean, dry and free of oil, grease or dirt. Any existing coating must be checked for proper adhesion. Before application, any loosely adhered coating must be removed and surfaces must be properly cleaned and checked for compatibility.

APPLICATION:
Mix lightly prior to application. Apply to surfaces by roof brush, medium nap roller or airless spray equipment.

COVERAGE RATE:
Apply 45 Sky-Kote over the surface at the rate of 1-2 gallons per 100 sq. ft.

PHYSICAL PROPERTIES:
Weight per Gallon: 8.4 lbs.
Solids by Weight: 33%
Color: Milky White
45 Sky-Kote (cont’d)

VOC Content: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

Dry Time: Less than 24 hours

CAUTION:
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

CARE OF TOOLS:
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or similar solvent, taking the necessary precautions when handling flammable materials.

PACKAGING:
Available in 5 gallon pails.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.
DESCRIPTION:
Karnak #66 Modified Bitumen Adhesive is a COLD-APPLIED, SBS POLYMER MODIFIED ASPHALT ADHESIVE, that provides great adhesive and elongation properties.

FEATURES, BENEFITS AND ADVANTAGES:
1. Easy to apply.
2. Eliminates the need for torches and kettles.
3. Excellent cure.
4. Tough, flexible, adhesive and cohesive film.
5. Excellent water and weather resistance.
6. Excellent general adhesive.
7. Excellent lap cement.
8. Good U.V. resistance.
9. Complies with current VOC regulations.
10. Elastomeric, moves with substrate.

USES:
Karnak #66 Brush-Grade is used to adhere SBS modified bitumen membranes, base and ply sheets. Karnak #66 Modified Bitumen Adhesive can also be utilized to adhere conventional BUR ply sheets or fully granulated cap sheets.

Karnak #66 Trowel-Grade can be used to make repairs on existing modified applications and flashings on vertical surfaces, i.e. skylights, vents and pipes.

SURFACE PREPARATION:
All surfaces should be free from oil, grease, dirt and loose materials. All BUR surfaces should be patched and repaired with Karnak #19 Ultra Rubberized Flashing Cement and Karnak #31 Glass Membrane. Metal surfaces must have all rust and scales removed.

APPLICATION:
Apply Karnak #66 Modified Bitumen Adhesive Brush Grade at a rate of approximately 1-2 gallons per 100 square feet on horizontal surfaces; irregular surfaces may require slightly more material. On vertical surfaces apply #66 Modified Bitumen Adhesive Trowel Grade at 1/8” thickness (approx. 8 gallons per 100 sq. feet.) Karnak #66 Modified Bitumen Adhesive may be applied by squeegee, roller, brush or trowel. Allow an open time of 15-20 minutes before placing membrane into adhesive.
Roofing

Read Material Safety Data Sheets before using this product.

66 Modified Bitumen Adhesive

COVERAGE RATE:
Apply Karnak #66 Modified Bitumen Adhesive Brush Grade at the rate of 1 to 2 gallons per 100 sq. ft. On porous or irregular surfaces, 2 gallons per 100 sq. ft. may be required. Karnak #66 Modified Bitumen Adhesive Trowel Grade should be applied at 1/8” thickness (approx. 8 gallons per 100 sq. feet.)

SPECIFICATIONS:
ASTM D-3019 Type III

PHYSICAL PROPERTIES:
Weight per Gallon: 8.65
Shear Strength: 18 lbs./sq. in.
Peel Strength: 10 lbs./lin. in.
Elongation: 200%
Recovery: 80%
Cure Time: 24 to 48 hours @ 77ºF
Application Temperatures: 40ºF to 100ºF

CAUTION:
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Excessive application may create blistering. Application at temperatures below 40ºF may take longer to cure. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. Do not thin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

CARE OF TOOLS:
Equipment may be thoroughly cleaned after use with mineral spirits, taking necessary precaution when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Roofing

Read Material Safety Data Sheets before using this product.

71 Fibered Asphalt Coating

DESCRIPTION:
Karnak 71 Fibered Asphalt Coating is a superior quality coating consisting of selected asphalts, mineral fibers and mineral spirits. Karnak 71 is designed to provide excellent weathering protection on most roof surfaces. It may be applied to smooth surface BUR, SBS modified bitumen membranes, metal surfaces and roll roofing as a protective coating. Karnak 71 may also be used as a protective coating to function as a dampproofing membrane. The coating forms a tough, elastic film to help retard the entrance of moisture into or through foundation walls.

USES:
Karnak 71 Fibered Roof Coating may be used on smooth surface BUR, or SBS Modified Bitumen Membranes, metal surfaces and roll-roofing as a protective roof coating. It may also be used as a dampproof coating on the interior face of above grade block (cmu) walls in cavity wall construction and above grade block walls and the exterior of below grade masonry walls where no hydrostatic pressure is present.

SURFACE PREPARATION:
Roofing: All surfaces should be swept clean of all dust and dirt. All blisters and breaks should be prepared with Karnak Cotton, Fiberglass or Poly-Mat Reinforcements and 19 Ultra Rubberized Flashing Cement or 19 Flashing Cement.

Dampproofing: All surfaces should be clean, dry and free form oil, grease, dust, dirt, loose coating or other foreign matter.

APPLICATION:
Roofing: Karnak 71 Fibered Roof Coating may be applied by brush or heavy duty spray equipment. Apply at the rate of 4 gallons per 100 sq.ft. For applications by brush, Karnak 71 is easily applied by pouring directly from the container and spreading with a wide fiber roof brush. Spray applications are easily and efficiently applied on large areas with either a standard type mastic pump or using airless spray equipment.

Dampproofing: Do not apply to damp or frost covered surfaces. Apply by brush or heavy duty spray equipment to form a continuous coat over the entire area. Apply at a rate of 4 gallons per 100 sq ft. Allow to cure for at least 24-48 hours. Care should be taken during backfilling not to puncture or damage the coating. Backfilling should take place within 7 days after application. It is recommended to use protection boards over the coating prior to backfilling.
Read Material Safety Data Sheets before using this product.

71 Fibered Asphalt Coating

**COVERAGE RATE:**
Apply at 4 gallons per 100 square feet.

**SPECIFICATIONS:**
ASTM D-4479 Type I  
Fed. Spec. SS-A-694d (except non-Asbestos)

**NOTE:**
COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE. PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**CAUTION:**

**CARE OF TOOLS:**
Tools should be thoroughly cleaned with mineral spirits, petroleum solvents or Karna-Klean taking necessary precautions when handling combustible materials.

**PACKAGING:**
Available in 1 gallon cans, 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
78 Cold Process Cement

DESCRIPTION:
Karnak #78 Cold Process Cement is a multi-purpose fast setting asphalt cement which can be used as a blind nail or lap cement with prepared rolled roofing. Karnak #78 Cold Process Cement can also be used in conjunction with any of Karnak’s Cold Process Roofing Systems (i.e.: P-21, P-22) or with other manufacturers’ coated fiberglass felts and base sheets.

SURFACE PREPARATION:
All surfaces to be coated should be dry and free of all dust, dirt or other loose debris.

APPLICATION:
Under normal conditions, Karnak #78 Cold Process Cement should be applied by brush at the rate of 2 to 3 gallons per 100 sq. ft. On large roof areas Karnak #78 Cold Process cement can be brushed, squeegeed or sprayed using airless sprayequipment. Application should be made at the rate of 1 to 2 gallons per 100 sq. ft.

SPECIFICATIONS:
ASTM D-3019 Type III
ASTM D-4479 Type I

CAUTION:

CARE OF TOOLS: Tools should be thoroughly cleaned with mineral spirits or Karna-Klean, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak #81 Modified Bitumen Adhesive is a PREMIUM COLD APPLIED, HIGH STRENGTH SBS POLYMER MODIFIED ASPHALT ADHESIVE, that provides excellent adhesion and elongation properties.

**FEATURES, BENEFITS AND ADVANTAGES:**
1. UL approved.
2. Eliminates the need for torches and kettles
3. Excellent cure.
4. Tough, flexible, adhesive and cohesive film.
5. Excellent water and weather resistance.
6. Excellent general adhesive.
7. Excellent lap cement.
8. Good U.V. resistance.
9. Easy to apply.
10. Elastomeric, moves with substrate.

**USES:**
Karnak #81 Brush-Grade is used to adhere SBS modified bitumen membranes, base and ply sheets. Karnak #81 Modified Bitumen Adhesive can also be utilized to adhere conventional BUR ply sheets or fully granulated cap sheets. Karnak #81 Trowel-Grade can be used to make repairs on existing modified applications and flashings on vertical surfaces, i.e. skylights, vents and pipes.

**SURFACE PREPARATION:**
All surfaces should be free from oil, grease, dirt and loose materials. All BUR surfaces should be patched and repaired with Karnak #19 Ultra Rubberized Flashing Cement and Karnak #31 Glass Membrane. Metal surfaces must have all rust and scales removed.

**APPLICATION:**
Apply Karnak #81 Modified Bitumen Adhesive Brush Grade at the rate of 1 to 2 gallons per 100 square feet on horizontal surfaces; irregular surfaces will require 2 gallons per 100 sq ft. On vertical surfaces apply #81 Modified Bitumen Adhesive Trowel Grade at 1/8” thickness (approx. 8 gallons per 100 sq. feet.) Karnak #81 Modified Bitumen Adhesive may be applied by squeegee, roller, brush or trowel. Allow an open time of 15-20 minutes before placing membrane into adhesive.
Read Material Safety Data Sheets before using this product.

81 Modified Bitumen Adhesive

**COVERAGE RATE:**
Apply Karnak #81 Modified Bitumen Adhesive Brush Grade at the rate of 1 gallon per 100 sq. ft. On porous or irregular surfaces, 2 gallons per 100 sq. ft. may be required. Karnak #81 Modified Bitumen Adhesive Trowel Grade should be applied at 1/8” thickness (approx. 8 gallons per 100 sq. feet.)

**SPECIFICATIONS:**
ASTM D-3019 Type III, ASTM D-3409

**PHYSICAL PROPERTIES:**
- Weight per Gallon: 8.65
- Shear Strength: 26 lbs./sq. in.
- Peel Strength: 13 lbs./lin. in.
- Elongation: 250%
- Recovery: 95%
- Set Time: 24 to 48 hours
- Dry Time: Approximately 30 days
- Application Temperatures: 40°F to 100°F

**CAUTION:**
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Excessive application may create blistering. Application below 40°F may take longer to cure. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. Do not thin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**CARE OF TOOLS:**
Equipment may be thoroughly cleaned after use with mineral spirits or Karna-Klean taking necessary precaution when handling combustible materials.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

89 Sta-Tack Primer

DESCRIPTION:
Karnak #89 Sta-Tack Primer is a waterbased polymer modified primer for self-adhering membranes. Karnak #89 Sta-Tack Primer penetrates pores and dries fast to provide a tacky surface.

FEATURES, BENEFITS AND ADVANTAGES:
1. Easy to apply.
2. Quick drying.
3. Promotes adhesion.
4. Use as is, needs no intermixing.
5. VOC compliant.

USES:
Karnak #89 Sta-Tack Primer is designed for use as a primer prior to the installation of self-adhering membranes. This thin solution readily penetrates pores and dries fast to provide a tacky, firm substrate for adhesion of the membranes.

Karnak #89 Sta-Tack Primer is suitable for use over asphalt, wood, plywood, gypsum board and concrete surfaces.

SURFACE PREPARATION:
All surfaces to be primed must be dry and free from dust, dirt, oil, grease and any other foreign matter.

APPLICATION:
Easily applied by brush, roller or hand sprayer at the rate of 0.20 (1/5th) gallon per 100 sq.ft. (500 sq.ft. per gallon).

COVERAGE RATE:
Apply at the rate of 0.20 gallon per 100 sq.ft.

PHYSICAL PROPERTIES:
- Weight per Gallon: 8.61 lbs.
- Solids by Weight: 37%
- Color: Blue
- Dry Time: 33 minutes @ 77°F and 50% RH
- Cure Time: 2 hours @ 77°F and 50% RH
- Service Temp: -40°F and 160°F
- Coverage: 0.20 gal. per 100 sq.ft.
- Application Temperatures: 40°F and rising.
- VOC’s: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations.
CAUTION:
Do not apply when rain is imminent. Protect from freezing. Primer must be dried before exposure to water. Store between 50°F and 100°F. Keep container covered when not in use. Do not thin. Keep out of reach of children. Do not take internally. Harmful if swallowed. Avoid contact with eyes and skin. Dispose of in an environmentally safe manner. Cover air intake during application and while drying.

CARE OF TOOLS:
Uncured materials may be cleaned with water. Cured material may be cleaned with Karna-Klean, mineral spirits or similar solvent.

PACKAGING:
Available in 1 gallon and 5 gallon pails.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
97 Fibered Aluminum Roof Coating

DESCRIPTION:
Karnak #97 Fibered Aluminum Roof Coating is made of selected asphalts and pigment flakes of pure aluminum blended with refined solvents and reinforcing fibers for heavy duty service. When Karnak #97 Fibered Aluminum Roof Coating is applied to the roof, the aluminum flakes leaf to the surface providing a reflective metallic shield over the base of the coating.

FEATURES, BENEFITS AND ADVANTAGES:
The advantages of this metallic aluminum shield are twofold:

1. The asphaltic oils in the base coating are protected from harmful intense rays of the sun by the reflective properties of the aluminum. Most of the sun’s rays are reflected by this aluminum shield, thereby preventing these oils from being “cooked” out of the base coating. The coating, therefore, retains its resilient characteristics and will not prematurely crack or dry out.

2. During the hot summer months, Karnak #97 Fibered Aluminum Roof Coating may help reduce indoor building temperatures and improve inside living and working conditions, by reflecting the sun’s rays and reducing roof surface temperatures.

One coat of Karnak #97 Fibered Aluminum Roof Coating will extend the life of modified bitumen membrane, not only by limiting fire-spread, (as indicated by the U.L. Class “A” Rating) but its high aluminum content and excellent reflectivity afford solar protection and weather durability.

Modified Bitumen: Karnak #97 Fibered Aluminum Roof Coating is U.L. Class A rated over specified Modified Bitumen Systems, UL Listing #RI2199(N).

USES:
Karnak #97 Fibered Aluminum Roof Coating helps reduce indoor building temperatures. It’s ideal for use on modified bitumen membranes, metal corrugated decks, steep asphalt that has aged for 90 days, or any Karnak emulsion coating that has been allowed to cure for 3-5 days.

SURFACE PREPARATION:
Prepare all surfaces by sweeping clean of dust, dirt, oil and loose particles. Repair all cracks and blisters by spreading Karnak #19 Ultra Rubberized Flashing Cement over the damaged area, then embed Karnak Cotton, Glass or Poly-Mat reinforcement and apply another coat of Karnak #19 Ultra Rubberized over the entire patch. New asphalt roof surfaces should weather a minimum of 90 days.
97 Fibered Aluminum Roof Coating

before being coated with Karnak #97 Ultra Rubberized Fibered Aluminum Roof Coating. However, Karnak #97 Fibered Aluminum Roof Coating can be coated on roofs 3 to 5 days after Karnak asphalt emulsions have been applied. Badly weathered or alligatored asphalt surfaces should be primed with Karnak 100 Non-Fibered Emulsion or 220 Fibered Emulsion prior to coating with 97 Fibered Aluminum Roof Coating. Allow emulsion primer to cure a minimum of 3-5 days before application of aluminum coating.

APPLICATION:
Karnak #97 Fibered Aluminum Roof Coating should be spread uniformly over the roof surface. Care should be taken not to overwork the coating during application. This could have a damaging effect on the leafing of the aluminum. Pour the correct amount of aluminum coating to cover a given area and work it in one direction. Be sure to mechanically mix the aluminum coating thoroughly before using. Karnak #97 Fibered Aluminum Roof Coating can be applied with a soft roof brush, roller or spray.

NOTE:
Discoloration will occur in areas where Karnak #19 Ultra Rubberized Cement is not allowed to dry a minimum of 60 days coating. After 60 days, recommended application temperatures are 50°F Fahrenheit and rising. Must not come in contact with any type of moisture within 24-48 hours after application.

COVERAGE:
Apply at the rate of 1 to 1.5 gallons per 100 sq. ft.

SPECIFICATIONS:
ASTM D-2824 Type III (Non-Asbestos) TT-C-498C (except Non-Asbestos)
ASTM D-3805 Miami-Dade Approved, ASTM D-962 Type II.

Cool Roof Council Rating (CRRC)
Solar Reflectance: Initial 0.63 3 year 0.55
Thermal Emittance: Initial 0.46 3 year 0.53
SRI: Initial 62 3 year 52

Note: Coating Modified Bitumen Membranes with Aluminum Coatings:
Karnak recommends coating torch-applied modified bitumen membranes as soon as possible after the membrane is installed.
Karnak’s experience, laboratory and field tests, as well as NRCA, RCMA and ARMA reports, indicate that aluminum coating will reduce the combined effects of ultraviolet rays, heat and moisture, which, especially on APP modified bitumens, enhance exudation that can cause discoloring and delamination of any surface coating.

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

CAUTION:

CARE OF TOOLS:
Equipment may be thoroughly cleaned after use with mineral spirits, taking the necessary precautions when handling combustible materials.

PACKAGING:
Available in 1 gallon cans, 5 gallon pails and 55 gallon drums.

If further information is required, please contact Karnak’s Technical Service Department at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak #98 Fibered Aluminum Roof Coating is a PREMIUM coating made of selected asphalts and pigment flakes of pure aluminum blended with refined solvents and reinforcing fibers for heavy duty service. When Karnak #98 Fibered Aluminum Roof Coating is applied to the roof, the aluminum flakes leaf to the surface providing a reflective metallic shield over the base of the coating. Karnak #98 Fibered Aluminum Roof Coating is a true 3 lb.+ aluminum pigment product conforming to ASTM D-962, Type II.

FEATURES, BENEFITS AND ADVANTAGES:
The advantages of this metallic aluminum shield are twofold:

1. The asphaltic oils in the base coating are protected from harmful intense rays of the sun by the reflective properties of the aluminum. Most of the sun’s rays are reflected by this aluminum shield, thereby preventing these oils from being “cooked” out of the base coating. The coating, therefore, retains its resilient characteristics and will not prematurely crack or dry out.

2. During the hot summer months, Karnak #98 Fibered Aluminum Roof Coating may help reduce indoor building temperatures and improve inside living and working conditions, by reflecting the sun’s rays and reducing roof surface temperatures.

One coat of Karnak #98 Fibered Aluminum Roof coating will extend the life of modified bitumen membrane, not only by limiting fire-spread (as indicated by the U.L. Class “A” rating), but its high aluminum content and excellent reflectivity afford solar protection and weather durability.

Modified Bitumen: Karnak #98 Fibered Aluminum Roof coating is U.L. Class A rated over specified Modified Bitumen Systems, UL Listing #R12199(N).

USES:
Karnak #98 Fibered Aluminum Roof Coating helps reduce indoor building temperatures. It’s ideal for use on modified bitumen membranes, metal corrugated decks, steep asphalt that has aged for 90 days, or any Karnak emulsion coating that has been allowed to cure for 3 to 5 days.

SURFACE PREPARATION:
Prepare all surfaces by sweeping clean of dust, dirt, oil and loose particles. All surfaces to be coated should be dry. Repair all cracks and blisters by spreading Karnak #19 Ultra Rubberized Flashing Cement over the damaged area, then embed Karnak Cotton, Glass or Poly-Mat reinforcement and apply another coat of
Karnak #19 Ultra Rubberized Flashing Cement over the entire patch. New asphalt roof surfaces should weather a minimum of 90 days before being coated with Karnak #98 Fibered Aluminum Roof Coating.

However, Karnak #98 Fibered Aluminum Roof Coating can be coated on roofs 3 to 5 days after Karnak asphalt emulsions have been applied.

Badly weathered or alligatored asphalt surfaces should be primed with Karnak 100 Non-Fibered Emulsion or 220 Fibered Emulsion prior to coating with 98 Fibered Aluminum Coating. Allow emulsion primer to cure a minimum of 3-5 days before application of aluminum coating.

**APPLICATION:**
Karnak #98 Fibered Aluminum Roof Coating should be spread uniformly over the roof surface. Care should be taken not to overwork the coating during application. This could have a damaging effect on the leafing of the aluminum. Pour the correct amount of aluminum coating to cover a given area and work it in one direction. Be sure to mechanically mix the aluminum coating thoroughly before using. Karnak #98 Fibered Aluminum Roof Coating can be applied with a soft roof brush, roller or spray.

**NOTE:**
Discoloration will occur in areas where Karnak #19 Ultra Rubberized Flashing Cement is not allowed to dry a minimum of 60 days. After 60 days, recommended application temperatures are 50° Fahrenheit and rising. Must not come in contact with any type of moisture within 24-48 hours after application.

**Note: Coating Modified Bitumen Membranes with Aluminum Coatings:**
Karnak recommends coating torch-applied modified bitumen membranes as soon as possible after the membrane is installed.

Karnak’s experience, laboratory and field tests, as well as NRCA, RCMA and ARMA reports, indicate that aluminum coating will reduce the combined effects of ultraviolet rays, heat and moisture, which, especially on APP modified bitumens, enhance exudation that can cause discoloring and delamination of any surface coating.

**COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.**

**PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION)
98 Fibered Aluminum Roof Coating

“THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**COVERAGE:**
Apply at the rate of 1 to 1.5 gallons per 100 sq. ft.

**SPECIFICATIONS:**
ASTM D-2824 Type III (Non-Asbestos)
UL Class “A” rated
ASTM-D-3805
ASTM-D-962 Type II
TT-C-498C (except Non-Asbestos)

**Cool Roof Rating Council (CRRC)**
- **Solar Reflectance:** Initial 0.63 3 year 0.55
- **Thermal Emittance:** Initial 0.46 3 year 0.53
- **SRI:** Initial 62 3 year 52

**CAUTION:**
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, **do not induce vomiting**. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. **Do not thin.** Do not apply when rain is imminent. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**CARE OF TOOLS:**
Equipment may be thoroughly cleaned after use with mineral spirits, taking the necessary precautions when handling combustible materials.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.

**If further information is required, please contact Karnak’s Technical Service Department at 1-800-526-4236.**

When installed properly, this product will help reduce energy costs. Actual savings will vary based on geographical location and individual building characteristics. Consult your product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937) for more information.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak #100 Non-Fibered Primer is a general purpose non-fibered emulsion primer prepared from an asphalt binder, carefully refined and emulsified in water by means of selected colloids. The asphalt emulsion thus produced is of heavy paint consistency. It is especially designed for use as a general utility prime coat for concrete, gypsum, masonry, brick, and metal surfaces over which waterproofing, dampproofing, roof coatings, membranes and other asphaltic products are to be applied. Karnak #100 Non-Fibered Primer is designed specifically to prepare surfaces for torch applied modified bitumen membrane, where solvent-based primers are not permitted or applicable. Karnak #100 Non-Fibered Primer will not burn or support combustion in a liquid state and will not flash. This is a low odor coating that resists the absorption of exterior moisture.

SURFACE PREPARATION:
All surfaces should be clean and free from oil, grease, dust, dirt and other foreign matter. Karnak #100 Non-Fibered Primer can be applied to damp surfaces. Dry surfaces may be dampened with water before application of Karnak #100 Non-Fibered Primer.

APPLICATION:
Karnak #100 Non-Fibered Primer is easily applied by brush, roller or spray equipment. Karnak #100 Non-Fibered Primer must be worked into all cracks and crevices.

BRUSH APPLICATION:
Apply with a soft wide fiber brush in even strokes, feathering the primer on the surface to obtain a smooth, uniform film.

COVERAGE RATE:
Karnak #100 Non-Fibered Primer is recommended at the rate of 1 to 2 gallons per 100 square feet, depending upon porosity and type of surface being primed.

SPECIFICATIONS:
ASTM D-1227 Type III Class 1
ASTM D-1187 Type II
SS-R-1781 MIL-R-3472A Type II
100 Non-Fibered Primer (quick-drying primer)

**PHYSICAL PROPERTIES:**

- **Weight per Gallon:** 8.5 Lbs.
- **Solids by Weight:** 52% Nominal
- **Solids by Volume:** 49% Nominal
- **Color:** Brown Wet-Black Dry
- **Permeability:** 0.5 Perms
- **Dry Time:** 2 to 4 hours @ 77°F, 50% RH
- **Service Temperature Range:** -5°F to 180°F

**CAUTION:**

Do not take internally. If swallowed, **do not induce vomiting.** Call a physician immediately. Keep out of reach of children. Do not apply when rain is imminent. **Protect from freezing.** Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. **Do not thin.**

**CARE OF TOOLS:**

Brushes, spray guns and other tools used for application should be immersed in water when not in use. Clean up with water when wet, dried material may be cleaned with mineral spirits or Karna-Klean. Take due precautions when handling flammable materials. Dispose of in an environmentally safe manner.

**PACKAGING:**

Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

107 Velvet Roof Coating

DESCRIPTION:
Karnak #107 Velvet Roof Coating is a non-fibered specially formulated black coating for use on all types of smooth surface asphalt roofs. It is prepared from selected asphalts and is carefully mixed with refined solvents to form a heavy paint consistency. Karnak #107 Velvet Roof Coating will withstand the rigors of hot summer temperatures and provide excellent protection against the ravages of weather and corrosion.

SURFACE PREPARATION:
All surfaces should be swept clean of all dust, dirt or loose particles. Repair all blisters, breaks and cracks with Karnak #19 Ultra Rubberized Flashing Cement and Karnak #34 Asphalt Saturated Cotton Fabric or Karnak #31 Fiberglass Membrane.

BRUSH APPLICATION:
Karnak #107 Velvet Roof Coating is easily applied with a wide, fiber roof brush. Apply at the rate of 1 to 2 gallons per 100 sq. ft.

SPRAY APPLICATION:
Karnak #107 Velvet Roof Coating can be sprayed efficiently on large areas with airless spray equipment. Apply at the rate of 1 to 2 gallons per 100 sq. ft.

COVERAGE:
Apply at the rate of 1 to 2 gallons per 100 sq. ft.
Read Material Safety Data Sheets before using this product.

107 Velvet Roof Coating

**CAUTION:**
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, **do not induce vomiting**. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. **Do not thin.** Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.**

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**CARE OF TOOLS:**
Tools and other equipment should be thoroughly cleaned with mineral spirits or Karna-Klean, taking necessary precautions when handling combustible material.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
General purpose, penetration asphalt primer used for the preparation of all types of surfaces previous to the application of hot or cold asphalt coatings. Karnak #108 Asphalt Primer is a controlled preparation of a highly ductile, soft asphalt in a refined solvent.

USES:
It is especially designed for use as a general utility prime coat for concrete, gypsum, masonry, brick and metal surfaces over which waterproofing, dampproofing, roof coatings and other asphaltic products are to be applied. This thin solution readily penetrates pores and seals dusty masonry surfaces to provide a firm base for such coatings. It is specified as a prime coat previous to the application of the membrane system of waterproofing on all concrete structures. It is also very efficiently used as a felt primer on old dried out built-up roofs where penetration is required to revitalize the base surfaces before roof coatings or cold applied systems are applied.

SURFACE PREPARATION:
All surfaces to be primed or coated with Karnak #108 Asphalt Primer must be dry and free from oil, grease and any other foreign matter.

SPECIFICATIONS:
ASTM D-41
AASHTO M-116

APPLICATIONS:
Easily applied by brush or spray equipment at the rate of .5 to 1 gallon per 100 sq. ft. depending upon porosity and type of surface being primed. Masonry and dried out built-up roof structures should be liberally coated to obtain the most penetration so that an effective bond can be achieved for the covering material.

COVERAGE:
Apply at the rate of .5 to 1 gallon per 100 sq. ft.
Read Material Safety Data Sheets before using this product.

108 Asphalt Primer (ASTM D-41)

**CAUTION:**
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, **do not induce vomiting**. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. **Do not thin.** Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**CARE OF TOOLS:**
Brushes and other tools may be thoroughly cleaned after use with mineral spirits or Karna-Klean, taking the necessary precaution when handling combustible materials.

**PACKAGING:**
Available in 5 gallon pails, 55 gallon drums and spray cans.

**If further information is needed, contact Karnak Technical Services at 1-800-526-4236.**

Please see page 222 for additional mold and safety information.
Roofing

Read Material Safety Data Sheets before using this product.

155 Amphibikote (wet and dry)

DESCRIPTION:
Karnak #155 Amphibikote is a carefully prepared, emergency roof cement with special water displacing characteristics, which ensures an effective bond to both wet and dry surfaces. The ability to adhere during inclement weather conditions makes Karnak #155 Amphibikote the first choice of both roofing contractors and plant engineers. Karnak #155 Amphibikote is composed of selected asphalts, mineral fillers combined with refined solvent, and special chemical ingredients which give it a unique water displacement quality. Available in three consistencies: Summer, Semi and Winter.

USES:
Karnak #155 Amphibikote is a cold process, heavy bodied, trowel applied emergency roof cement ideal for repairing leaks in asphalt built-up roofs, flashing on walls, chimneys, skylights and vents, down-spouts and gutters. The dried film retains its flexibility and ductility so the coating will resist extreme variations in temperature and weather.

SURFACE PREPARATION:
Although it can be applied underwater for emergencies, it is best if all surfaces are clean, dry and free from oil, grease, dust, dirt, loose paint or foreign matter.

APPLICATION:
Karnak #155 Amphibikote is ready to use directly from the container. No heating is required. Spread Karnak #155 Amphibikote by trowel to an average thickness of 1/8” (8 gals. per square per coat) or greater to all surfaces to be treated. To repair large cracks or breaks, spread Karnak #155 Amphibikote over the damaged area, then embed Karnak Cotton, Glass or Poly-Mat membrane Reinforcement and re-apply another coat of Karnak #155 Amphibikote over the entire patch.

SPECIFICATIONS:
ASTM D-4586 Type I Class I & Class II
ASTM D-3409

Federal Specification SS-C-153 Type I (except asbestos free)
**CAUTION:**
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, **do not induce vomiting**. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. **Do not thin.** Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**CARE OF TOOLS:**
Trowels and other equipment should be thoroughly cleaned with mineral spirits or petroleum solvents, taking necessary precautions when handling combustible materials.

**PACKAGING:**
Available in 1 gallon cans, 3 gallon buckets, 5 gallon pails and 10.1oz cartridges.

**If further information is needed, contact Karnak Technical Services at 1-800-526-4236.**

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

168 Tar Roof Resaturant

DESCRIPTION:
Karnak #168 Tar Resaturant is a heavy duty non-asbestos protective coating for long lasting, weather-resisting protection for tar and gravel roofs, scientifically compounded to provide a completely monolithic coating assuring years of added roof life. Prepared from highly refined coal tar pitch base and thoroughly mixed mechanically with rust inhibitive chromates.

SURFACE PREPARATION:
Remove all loose gravel, dirt and dust from roof by vacuuming, sweeping or power broom. Repair all blisters, breaks or holes with Karnak #170 Tar Cement and Karnak #5540 Resat-Mat or Karnak #31 Fiberglass Membrane.

SPECIFICATIONS:
Made with ASTM D-450A Type I
Fed. Spec. #RP-381 Type I
SS-C-540B

BRUSH APPLICATION:
Karnak #168 Tar Roof Resaturant is easily applied with a wide, fiber brush at the rate of 7 to 8 gallons per 100 sq. ft. After application of Karnak #168 Tar Roof Resaturant is completed, clean, dry gravel should be re-applied at the rate of 400 lbs. per 100 sq. ft.

SPRAY APPLICATION:
Efficiently sprayed on large areas with standard mastic pump-type equipment. Apply at the rate of 7 to 8 gallons per 100 sq. ft. After application of Karnak #168 Tar Roof Resaturant is completed, gravel should be re-applied at the rate of 400 lbs. per 100 sq. ft.

COVERAGE:
Apply at the rate of 7 to 8 gallons per 100 sq. ft.
168 Tar Roof Resaturant

**PHYSICAL PROPERTIES:**
- Solids, Fed Spec. No. 791: 57% - 58%
- ASH Fed. Spec. SSR-C, Method 226: 5%
- Flash Point, Fed. Spec.SSR-406C, Method 217.01: 185°F
- Weight per Gal: 9.84 lbs.
- Touch Dry at 77°F: 24 hrs.
- Viscosity: 8000 cps
- Serv. Temp: 20° - 160°F
- Saturation: 35-C-540
- 1-6 Felts: 90%
- 7-8 Felts: 10%
- Low Temp Flex (6 hrs. at 25°F): Passes

**CARE OF TOOLS:**
Tools and other equipment should be thoroughly cleaned with coal tar solvents, taking necessary precautions when handling combustible materials.

**CAUTION:**

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
169 Non-Fibered Aluminum Roof Coating

DESCRIPTION:
Karnak #169 Non-Fibered Aluminum Roof Coating is a formulation of selected asphalts, refined solvents and fine aluminum flakes. When the coating is applied to the roof, the aluminum flakes leaf in overlapping parallel layers, forming a reflective, metallic shield over the base material.

The combination of these two protective materials, aluminum and asphalt, by the exclusive Karnak process results in a self-protecting roof coating with longer-lasting moisture and heat-resistant properties. Karnak #169 Non-Fibered Aluminum Roof Coating remains permanently bonded to the base material, thus assuring longer roof life with subsequent savings on roof maintenance.

FEATURES, BENEFITS AND ADVANTAGES:
The asphaltic oils in the base coating are protected from the intense rays of the sun by the reflective properties of the aluminum. Most of the sun’s rays are reflected by this aluminum shield, thereby preventing these oils from being “cooked” out of the base coating. The coating, therefore, retains its resilient characteristics and will not prematurely crack or dry out. During the hot summer months, Karnak #169 Non-Fibered Aluminum Roof Coating will help reduce indoor building temperatures and improve inside living and working conditions. Karnak #169 Non-Fibered Aluminum Roof Coating prevents the sun’s rays from penetrating the roof coating and passing the heat into the building interior.

USES:
Karnak #169 Non-Fibered Aluminum Roof Coating is ideal for use on modified bitumen membranes, metal corrugated roofs and steep asphalt surfaces. New BUR asphalt roofs should weather a minimum of 90 days before being coated with Karnak #169 Non-Fibered Aluminum Roof Coating. However, it can be coated on roofs 3 to 5 days after Karnak asphalt emulsions have been applied.

SURFACE PREPARATION:
All surfaces should be clean, dry and free from oil, grease, dust, dirt, loose paint or other foreign matter. Badly weathered or alligatored asphalt surfaces should be primed with Karnak 100 Non-Fibered Emulsion or 220 Fibered Emulsion prior to coating with 169 Non-Fibered Aluminum Roof Coating. Allow emulsion primer to cure a minimum of 3-5 days before application of aluminum coating.

APPLICATION:
Karnak #169 Non-Fibered Aluminum Roof Coating should be spread uniformly over the roof surface. Care should be taken not to overwork the coating while applying. This will have a damaging effect on the leafing action of the aluminum.
169 Non-Fibered Aluminum Roof Coating

Be sure to mechanically mix the aluminum coating thoroughly before using. Karnak #169 Non-Fibered Aluminum Roof Coating can be applied with a soft roof brush, roller or spray.

**COVERAGE:**
Apply at the rate of 0.5 to 1 gallon per 100 square feet.

**SPECIFICATIONS:**
ASTM D-2824 Type I.
ASTM D-3805
UL Class A (See UL Directory)

**Cool Roof Rating Council (CRRC)**
- Solar Reflectance: Initial 0.54 3 year 0.56
- Thermal Emittance: Initial 0.54 3 year 0.51
- SRI: Initial 51 3 year 53

**Note: Coating Modified Bitumen Membranes with Aluminum Coatings:**
Karnak recommends coating modified bitumen membranes as soon as possible after the membrane is installed.

Karnak’s experience, laboratory and field tests, as well as NRCA, RCMA and ARMA reports, indicate that aluminum coating will reduce the combined effects of ultraviolet rays, heat and moisture, which, especially on APP modified bitumens, enhance exudation that can cause discoloring and delamination of any surface coating. After 60 days, recommended application temperatures are 40°F Fahrenheit and rising. Must not come in contact with any type of moisture within 24-48 hours after application.

**CAUTION:**

**CARE OF TOOLS:**
Tools and other equipment should be thoroughly cleaned with mineral spirits or...
Karna-Klean, taking necessary precautions when handling combustible materials.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

If further information is required, please contact Karnak’s Technical Service Department at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak #170 Tar Cement is a non-asbestos, tar base, plastic cement with unique water repellent characteristics. Karnak #170 Tar Cement is ideal for emergency roof repairs when roof leaks occur since it can actually be applied under water. Prepared to a heavy consistency for application by trowel to provide a durable, elastic coating with long-lasting, weather-resisting protection, this product gives excellent performance over a wide range of temperatures and conditions and has excellent self-healing properties.

USES:
A general purpose tar roof cement for repairing splits, cracks, holes and blisters on built up coal tar roofs. Average coverage is 1/16” thick or approximately 4 gallons per square.

SURFACE PREPARATION:
All surfaces should be clean, dry and free from oil or grease, dust, dirt, loose paint or other foreign matter.

APPLICATION:
Spread Karnak #170 Tar Cement to an average thickness of 1/16” to repair blisters, breaks or seams. This product is ready to use directly from the pail and should not be thinned in any way. In cold weather, stiffness can be reduced by storing the container in a warm area before using.

SPECIFICATIONS:
ASTM D-4022 (Except Asbestos-Free)
Fed. Spec. SS-C-153 Type II.

PHYSICAL PROPERTIES:
Solids by Wt.: 77%
Solids by Volume: 66%
Wt. per Gallon: 9.59%

RESISTANCE TO:
Bacteria and corrosive acids of soil, chemical fumes and vapors, most acids and alkali occurring in industry.
Read Material Safety Data Sheets before using this product.

170 Tar Cement

**CAUTION:**
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, **do not induce vomiting**. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. **Do not thin.** Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**CARE OF TOOLS:**
Tools and other equipment should be thoroughly cleaned with coal tar solvents, taking the necessary precautions when handling combustible materials.

**PACKAGE SIZE:**
Available in 5 gallon pails.

**FOR THE PROTECTION OF FLAT-LEVEL TAR AND GRAVEL ROOFS:**
Product is self-healing and will run off any surface that is not level and flat.

Product has a strong odor. Cover air intakes while drying. Do not use around food products. Before starting work, protect exposed skin with ultra-violet blackout protective cream.

**FOR EXTERIOR USE ON FLAT SURFACES ONLY.**

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak 180 Karna-Sil Epoxy Primer is a two part, water-based epoxy primer that is mixed together in a 1 to 1 ratio.

**USES:**
180 Karna-Sil Epoxy Primer is used to prime and prepare built-up asphalt (BUR), modified bitumen membrane, concrete, masonry, TPO, PVC, Hypalon and EPDM surfaces prior to applying 670HS Karna-Sil Ultra silicone coating. Primer may be applied on vertical as well as horizontal applications. All surfaces must have positive drainage. 180 Karna-Sil is not needed over existing silicone coated SPF roof prior to the application of 670HS Karna-Sil Ultra silicone coating.

**SURFACE PREPARATION:**
Surfaces to be coated should be dry, clean, and free of dirt, dust, grease, oil and loose rust or coating. Power wash surfaces with 799 Wash-N-Prep Roof Cleaner or 507 SPC Primer/Wash (EPDM only) and water. Wash roof surfaces with a minimum of 2000 psi. taking all necessary precautions to avoid damage to the roof system. Patch and repairs all seams, flashings, damaged areas, leaks, and cracks with Karna-Flex WB, 502 Karna-Flex, 550 Patch-N-Go self sealing tape or appropriate Karna-Flex elastomeric sealants or caulking materials. Commencement of work by the contractor implies his approval of the roof surface.

**APPLICATION:**
The two components, 180 Karna-Sil Epoxy Primer Part “A” and 180 Karna-Sil Epoxy Primer Part “B”, should be both mixed individually first, then combine and mix thoroughly. Mechanically mixing is recommended. Part A is a slurry liquid that settles while Part B is a viscous liquid. The combined product is thixotropic and spreads easily. Do not use material that has been mixed for 4 hours or more.

Apply at the average rate of 200-300 sq.ft. per gallon on smooth surfaces. Porous or irregular surfaces will require additional primer. Note that applying too much primer will reduce the adhesion strength. Over smooth BUR & smooth modified apply at the rate of 100-150 sq.ft. per gallon; granulated modified apply at 75-100 sq.ft. per gallon; concrete apply at 150-200 sq.ft. per gallon and smooth single ply apply at 300 sq.ft. per gallon. Apply nylon brush, 1/4” to 3/8” nap roller or airless spray equipment. For application over smooth surfaces add up to one pint of water per gallon of mixed 180 Karna-Sil Epoxy Primer. Apply
180 Karna-Sil Epoxy Primer

670HS Karna-Sil Ultra over primer as soon as it has thoroughly set, which is normally 2-3 hours (dependent upon temperature and humidity). Best adhesion is achieved when coated over in 1-3 days. May be coated over for up to 7 days after application.

**COVERAGE RATE:**
- Smooth BUR: 100-150 sq.ft./gal.
- Smooth Modified: 100-150 sq.ft./gal.
- Granulated Modified: 75-100 sq.ft./gal.
- Concrete/Masonry: 150-200 sq.ft./gal
- Smooth Single Ply: 300 sq.ft./gal.

**PHYSICAL PROPERTIES:**

Weight per Gallon: 11.7 lbs.
Solids by Weight: 60% ASTM D-1644
Solids by Volume: 42% ASTM D-2697
Color: White (Part A)
        Black (Part B)
Hardness: Cures to hard coating
Permeability: Cures to a solvent and vapor resistant film
Service Temperature: 180°F
Cure Time: 2-3 hrs.
            (Temp. & Humidity Dependent)
Shelf Life (Unopened): 1 year
            (Stored at 45°F - 75°F)
VOC Content: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

**CAUTION:**
For professional use. Use with appropriate MESA/NIOSH approved respirator. The use of neoprene gloves and safety glass is also recommended. Do not apply when rain is imminent or if dew is likely to occur before curing of product. Do not use when weather conditions are below 50°F or when there is a chance that temperatures could fall below 32°F within a 24 hour period after application. Do not apply to surfaces that are above 130°F. Keep containers properly sealed when stored indoors, in a cool well-ventilated area. Keep containers away from...
moisture. Keep away from heat, sparks and open flame. Do not store above 100°F. **Do not thin.** Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying. Wear the appropriate PPE. Please refer to MSDS for more safety information.

**CARE OF TOOLS:**
While material is still wet clean up with water and soap. For cleaning spraying equipment use MEK to avoid corrosion, but make sure hoses are solvent resistant. Take necessary precautions when handling flammable materials.

COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**PACKAGING:**
Available in 10 gallon kits / Part A & Part B packaged separately in 5-gallon pails.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.
197 Karnastatic “Slaters” Cement

DESCRIPTION:
Karnak #197 Karnastatic Cement is prepared from a blend of selected asphalts, special additives, mineral fibers and refined solvents. This composition is then passed through a high speed mixer which results in a smooth trowel-like-consistency in the finished product.

Karnak #197 Karnastatic Cement dries to a firm and hard finish. Because of its rapid curing action, Karnak #197 Karnastatic Cement is dry to the touch in just a few hours.

USES:
Because Karnak #197 Karnastatic Cement will not run or sag on vertical surfaces, it is ideal for use on:

• Flashings and parapet walls.
• As a gutter liner for either metal or wooden gutters.
• Dampproofing exterior masonry walls.

SURFACE PREPARATION:
All surfaces should be clean and free of all dust, dirt, oil, grease, rust, loose paint, or other foreign matter.

COVERAGE RATE:
Apply by trowel to an average thickness of 1/8” (8 gallons per 100 sq.ft.).

SPECIFICATION:
ASTM D-4586 Type II Class I

CAUTION:
197 Karnastatic “Slaters” Cement

**CARE OF TOOLS:**
Tools and other equipment should be thoroughly cleaned with mineral spirits or Karna-Klean, taking necessary precautions when handling flammable materials.

**PACKAGING:**
Available in 5 gallon pails. If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

198 Asphalt Roof Resaturant

DESCRIPTION:
Karnak #198 Asphalt Roof Resaturant is a carefully prepared blend of selected asphalt, mineral fillers and selected penetrating oils. These penetrating oils soak into the existing roof mat to help rejuvenate the old asphalt. In addition, a thick layer of asphalt remains on the surface of the roof to protect it from the ultra-violet rays of the sun as well as serving as a binder for the replacement of the gravel or slag.

SURFACE PREPARATION:
Remove all loose gravel, dirt and dust from the roof by sweeping or power brooming. If existing gravel is to be reused, it must be washed free of silt. Repair all blisters, breaks or holes in the roof with Karnak #19 Ultra Rubberized Flashing Cement and Karnak #34 Asphalt Saturated Cotton Fabric, Karnak #31 Fiber-Glass Membrane, or Karnak #5540 Resat-Mat.

APPLICATION:
Brush: Karnak #198 Asphalt Roof Resaturant is easily applied when poured directly from the container and spread with a thick fiber roof brush at the rate of 7 to 8 gallons per 100 sq. ft. After application of Karnak #198 Asphalt Roof Resaturant is completed, gravel should be re-applied at the rate of 400 lbs. per 100 sq. ft.

Spray: Karnak #198 Asphalt Roof Resaturant is easily and efficiently applied on large areas with a standard mastic pump. The coating should be sprayed on in one coat at the rate of 7 to 8 gallons per 100 sq. ft. applied with a 50% overlap of the spray pattern so as to obtain a uniform and continuous film.

After application of Karnak #198 Asphalt Roof Resaturant is completed, gravel should be reapplied at the rate of 400 lbs. per 100 sq. ft.

CAUTION:
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. Do not thin. Dispose of in an environmental safe manner. Cover air intakes during application and while drying.

CARE OF TOOLS:
Equipment may be thoroughly cleaned after use with mineral spirits or Karna-Klean taking necessary precaution when handling combustible materials.
198 Asphalt Roof Resaturant

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

PACKAGING:
Available in 55 gallon drums and 5 gallon pails.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak #220 Emulsion Roof Coating is manufactured with refined asphalt, bentonite clay, emulsifiers and fibers for brush or spray application on BUR roofs, modified bitumen membrane roofs, metal and concrete roof surfaces. The dried film cures to a tough, flexible, durable finish and will resist variations in temperature and weather. Karnak #220 Emulsion Roof Coating will not burn or support combustion in a liquid state. This is a low odor coating. This coating is a “dead-level” type coating that resists the absorption of exterior moisture.

USES:
Karnak #220 Emulsion Roof Coating may be used on smooth surface BUR, smooth or granular APP and SBS modified bitumen membranes, metal roofs and concrete as a protective coating. Ideal as a prime coating prior to application of a reflective roof coating. Also may be used in Karnak’s “220 System” for cold-applied roof maintenance.

SURFACE PREPARATION:
All surfaces should be clean, dry, and free from oil, grease, dust, dirt, loose paint or other foreign matter prior to application. Repair all blisters, breaks and cracks with Karnak #19 Ultra Rubberized Flashing Cement and #31 Fiberglass or #34 Asphalt Cotton Fabric.

APPLICATION:
Brush:
Karnak #220 Emulsion Roof Coating is easily applied with a wide fiber roof brush using wide even strokes, flowing the coating on the surface to obtain a smooth and uniform film. Apply at the rate of 4 gallons per 100 sq. ft. which will provide adequate protection for most surfaces. Make sure to brush into all cracks and crevices.

Spray:
Karnak #220 Emulsion Roof Coating may be easily and efficiently spray applied on large areas with a standard heavy-duty airless spray unit. Apply at the rate of 4 gallons per 100 sq. ft.

COVERAGE:
Apply at the rate of 4 gallons per 100 sq. ft. over most roof surfaces.
Roofing

Read Material Safety Data Sheets before using this product.

220 Emulsion Roof Coating (brush or spray)

SPECIFICATIONS:
ASTM D-1187 Type I & Type II
ASTM D-1227 Type II Class I
SS-R-1781 (except asbestos-free)
MIL-R-3472A (except asbestos-free)

CAUTION:
Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container closed when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

CARE OF TOOLS:
Tools and other equipment should be cleaned with water immediately after use. Dried material may be thoroughly cleaned with 709 Karna-Klean, mineral spirits, or similar solvents, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails, 55 gallon drums, and 275 gallon totes.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak 229AR-Elastomeric is a single component, SBS rubber reinforced asphalt which forms a highly elastomeric roof coating barrier. 229AR has excellent elongation properties, good cold weather pliability and excellent water and weather resistance.

**FEATURES, BENEFITS AND ADVANTAGES:**
- Easy to apply: Comes in Brush or Trowel Grades
- Tough, flexible, elastic, rubber-like film.
- Excellent adhesion to most surfaces including primed concrete, masonry, metal, asphalt, modified bitumen membranes and spray polyurethane foam roofing.
- Excellent water and water vapor resistance.
- Excellent weather resistance.
- One component, needs no intermixing.
- Good resistance to salts and alkalies.
- Compatible with many highway and bridge specifications.

**USES:**
Karnak 229AR Elastomeric is available in BRUSH, TROWEL or CAULK grades. Brush grade may be used on BUR, SBS or APP modified bitumen membranes, concrete, and spray polyurethane foam as a protective coating. Trowel grade can be used to make repairs on BUR, SBS or APP modified bitumen membranes, concrete, spray polyurethane foam and metal. Caulk grade is ideal for sealing on asphalt surfaces as well as masonry, metal, spray polyurethane foam, wood, stone, brick and concrete.

**SURFACE PREPARATION:**
Surfaces must be clean, dry and free from oil, grease, release agents, laitance, dirt, dust and debris. All cracks and holes should be filled with 229AR Elastomeric Trowel Grade prior to surface coating.

**APPLICATION:**
Karnak 229AR Elastomeric Brush Grade should be mechanically mixed thoroughly, prior to application. For vertical applications use only 229AR Elastomeric Trowel Grade.
Roofing

Read Material Safety Data Sheets before using this product.

229AR Elastomeric

Trowel Grade – Apply to either vertical or horizontal surfaces using a smooth edge trowel. Coverage will vary depending on the desired thickness. To achieve a 1/16” thickness apply at the rate of 4 gallons per 100 sq. ft.; 1/8” thickness apply at the rate of 8 gallons per 100 sq. ft.; ¼” thickness apply in two coats at the rate of 8 gallons per 100 sq. ft. per coat.

Brush Grade – Mix thoroughly just prior to using. Apply to horizontal roof surfaces with a fiber roof brush at the rate of 3 to 4 gallons per 100 sq. ft. Coverage will vary depending on the irregularity and porosity of the roof surface.

Caulk Grade – Apply directly in and over cracks using a standard caulking gun. An application rate of ¼” x ¼” bead of caulk will yield approximately 75 linear feet per 30 oz. caulking cartridge. Coverage may vary depending on desired thickness and surface being caulked.

SPECIFICATIONS:
ASTM D-4586 Type I Class I
ASTM D-4479 Type I
ASTM D-3409
Complies with CH. 13 of Massachusetts Energy Code

PHYSICAL PROPERTIES:
Weight Per Gallon: 8.6 lbs.
Hardness, Shore A: 55 ASTM D-2240
Elongation: 350% ASTM D-412
Tensile Strength, PSI: 400 ASTM D-412
Color: Black
Water Vapor Permeance: 0.017 perm ASTM E-96
Air Permeability (Leakage): 0.000 L/(s·m²) @ pressure difference of 75 Pa
Service Temp. Range: -40°F to 160°F
Solids: Trowel 70%, Brush 63%, Spray 60% ASTM D-2697
VOC Content: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations
229AR Elastomeric

CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with 709 Karna-Klean. Mineral spirits or similar solvent may also be used, taking necessary precautions when handling combustible material.

PACKAGING:
Available in 1 gallon, 3 gallon & 5 gallon pails, 55 gallon drums and 30 oz. caulking cartridges

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak 297 Aqua-Lum is a water-based aluminum asphalt emulsion coating that forms a reflective shield over asphalt roofing systems and is formulated to meet all VOC regulations. Karnak 297 Aqua-Lum can be applied to hot-applied BUR or SBS Systems as soon as they have cured and can bear foot traffic firmly, thus eliminating the standard 90 to 180 day cure time normally required prior to coating with conventional solvent based aluminum coating. This coating may also be applied to APP modified bitumen membranes.

FEATURES, BENEFITS AND ADVANTAGES:
1. High reflectivity reduces surface temperature, which could result in energy savings.
2. Reduces ultraviolet degradation.
3. Hot-applied BUR may be coated after it has cured and can bear foot traffic firmly.
4. Cold-applied solvent-based systems may be coated when dry and firm.
5. Reduces thermal shock and solar radiation helping to prolong roof life.
6. Non-polluting, non-flammable, water vehicle, contains no asbestos.
7. Has superior bleed through resistance.
8. May be applied over damp surfaces.
9. Dries within two hours.
10. Roof surface temperatures may be reduced 15°F or more.

SURFACE PREPARATION:
Areas to be coated should be free of dust, dirt, loose particles, rust, oil, standing water, or anything that might inhibit adhesion. Repair all cracks, breaks and blisters with cotton, glass or polyester membrane and Karnak 19 Ultra Rubberized Flashing Cement. Allow 24-48 hours to dry. Badly weathered or alligatored asphalt surfaces should be primed with Karnak 100 Non-Fibered Emulsion or 220 Fibered Emulsion prior to coating with 297 Aqua-Lum. Allow emulsion primer to cure a minimum of 3-5 days before application of aluminum coating.

APPLICATION:
Prior to using, Karnak 297 Aqua-Lum must be mechanically mixed in the following manner:
1. Open and remove insert and bag from pail.
2. Empty contents of bag into the pail.
3. Mix pail, using a Jiffy type mixer on a ½” drill for 3 – 5 minutes.
4. Pail is ready to use when contents are blended smooth.
Karnak 297 Aqua-Lum may be applied by soft brush, roller, or heavy-duty airless spray at 2 gallons per 100 square feet. A one coat application usually gives sufficient protection over most adequately prepared surfaces. For best results when using a brush or roller, keep them immersed in the product or in water to help eliminate the solidification of the coating. Apply coating in the same direction for a more uniform appearance. Solvent-based roof coatings and cements may be coated after surface is set well enough to bear foot traffic. B.U.R. may be coated after it has cured and can bear foot traffic firmly. SBS and APP modified bitumen membranes can be coated directly with Karnak 297 Aqua-Lum immediately after completion of the roof. If there is evidence of contamination on the membrane surface, the contamination should be removed completely.

**COVERAGE RATE:**
2 gallons per 100 sq. ft.

**NOTE:** Karnak recommends coating modified bitumen membranes as soon as possible after the membrane is installed. Karnak’s experience, laboratory and field tests, as well as NRCA, RCMA and ARMA reports, indicate that the aluminum coating a roof surface will reduce the combined effects of ultraviolet rays, heat and moisture. After 60 days, recommended application temperatures are 50° Fahrenheit and rising. Must not come in contact with any type of moisture within 24-48 hours after application.

**CAUTION:**
Do not apply when rain is imminent. Moist, not wet, surfaces may be coated. Do not apply at temperatures below 45°F or above 100°F. Protect from freezing.

Storage temperatures: 50°F - 90°F. During hot weather application, keep brush or roller moist. Rotate stock so first in is first out. Coating must be dry before exposure to water. Do not thin. Mechanically mix before application. Cover air intakes during application and while drying. Warning, once product is mixed it must be completely used. Do not attempt to store mixed product.

**CARE OF TOOLS:**
Equipment may be cleaned with soapy cold water. Dried coating may be cleaned with mineral spirits.
297 Aqua-Lum

PACKAGING:
Available in 5 gallon pails.

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak #298 Alumin-R is a PREMIUM grade, single component, SBS rubber modified asphalt reflective coating specially formulated with aluminum pigment to be used as a reflective elastomeric coating over modified bitumen membranes, BUR asphalt roofs, properly sloped residential concrete roofs and metal roof surfaces.

FEATURES, BENEFITS AND ADVANTAGES:
1. Easy to apply.
2. 24 hour cure.
3. Tough, flexible elastic, rubber-like film.
4. Excellent adhesion over clean asphalt surfaces.
5. Excellent water and water vapor resistance.
6. Excellent weather resistance.
7. Good resistance to salts and alkalies.
8. Aluminum reflectant characteristics.

USES:
Karnak #298 Alumin-R is recommended as a coating for use on modified bitumen membranes, BUR, concrete tile, metal and mobile home roofs.

SURFACE PREPARATION:
All surfaces to be coated with Karnak #298 Alumin-R must be clean, dry, free from oil, grease, and loose debris. New BUR asphalt roofs should be allowed to weather 90-180 days before coating.

Modified bitumen membranes should be coated immediately after the membrane has been laid into place. Metal roofs should be cleaned with a power washer using a minimum of 3000-3500 psi to remove rust and loose flaking prior to the application of Karnak #298 Alumin-R. New metal should be allowed to weather 30 days before coating.

Karnak #298 Alumin-R should be mechanically mixed for several minutes before application.

Badly weathered or alligatored asphalt surfaces should be primed with Karnak 100 Non-Fibered Emulsion or 220 Fibered Emulsion prior to coating with 298 Alumin-R. Allow emulsion primer to cure a minimum of 3-5 days before application of aluminum coating.
298 Alumin-R

APPLICATION:
Karnak #298 Alumin-R can be applied by brush, roller or spray. If spray equipment is utilized, use a standard heavy duty spray pump. Equipment manufacturer should be consulted for more complete information.

PHYSICAL PROPERTIES:
- Weight per Gallon: 8.5 lbs.
- Solids by Weight: 47%
- Color: Silver
- Permeability: 0.15 mg.per sq. cm.
- Cure Time: 24 to 48 hrs.
- Performance Temp.Range: -40°F to 180°F
- Application Temperature: 40°F and Rising
- Elongation: 300% D-412
- Tensile Strength: 300% D-412

Cool Roof Rating Council (CRRC)
1. Solar Reflectance: Initial 0.68 3 year 0.61
2. Thermal Emittance: Initial 0.40 3 year 0.45
3. SRI: Initial 69 3 year 59

COVERAGE RATE:
Recommended rate of 1.5 to 2 gallons per 100 sq. ft. in one application.

CAUTION:

CARE OF TOOLS:
Tools may be cleaned with mineral spirits or similar solvent.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

Note: Coating Modified Bitumen Membranes with Aluminum Coatings:
Karnak recommends coating torch-applied modified bitumen membranes as soon as possible after the membrane is installed.
Karnak’s experience, laboratory and field tests, as well as NRCA, RCMA and ARMA reports, indicate that aluminum coating will reduce the combined effects of ultraviolet rays, heat and moisture, which, especially on APP modified bitumens, enhance exudation that can cause discoloring and delamination of any surface coating. After 60 days, recommended application temperatures are 40° Fahrenheit and rising. Must not come in contact with any type of moisture within 24-48 hours after application.

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

When installed properly, this product will help reduce energy costs. Actual savings will vary based on geographical location and individual building characteristics. Consult your product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937) for more information.

Please see page 222 for additional mold and safety information.
**Read Material Safety Data Sheets before using this product.**

## 404 Corrosion Proof (Metal Surface Base Coat)

### DESCRIPTION:
Karnak 404 Corrosion Proof base coat is a self-priming, modified acrylic, coating that can encapsulate existing surface rust on properly prepared metal and inhibits the development of new rust on metal surfaces.

### USES:
404 Corrosion Proof is recommended for use as an elastomeric coating applied to both clean and properly prepared but marginally rusty steel, and imparts excellent corrosion resistance, adhesion, and low temperature flexibility. The coating is intended for use as a base coat on new metal and lightly rusted metal roof surfaces prior to the application of 535QS Enviro-Lastic, 501 Elasto-Brite, or 529 Renu-White topcoats. New metal surfaces must be allowed to age 30 days before coating.

### SURFACE PREPARATION:
Surfaces to be coated should be dry, clean, and free of dirt, dust, grease, oil and loose rust or coating. Power wash surfaces with 799 Wash-N-Prep Roof Cleaner and water. Wash roof surfaces with a minimum of 2000 psi. taking all necessary precautions to avoid damage to the roof system. Seal fasteners, seams and flashings with 550 Patch-N-Go Fleece self-sealing tape or Resat-Mat and Karna-Flex WB or appropriate sealants or caulking materials.

### APPLICATION:
Mix lightly prior to application of the coating. 404 Corrosion Proof may be applied by brush, spray equipment or roller. For applications in higher temperatures (above 90 °F) Karnak recommends application in multiple thin coats to prevent trapped moisture problems. Commencement of work by the contractor implies his approval of the deck surface.

### SPRAY APPLICATION:
Utilize a standard paint spray pump or airless spray pump. Equipment manufacturer should be consulted for more complete information. Spray application should be done with a 50% over-spray pattern.
404 Corrosion Proof (Metal Surface Base Coat)

**COVERAGE RATE:**
Apply 404 Corrosion Proof over the surface at the rate of 1.5 gallons per 100 sq. ft.

Allow to dry 12 hours then apply the selected finish coating. The total dry mil thickness of 404 Corrosion Proof and finish coating should be 20 to 24 mils. Coverage will vary depending on the surface to be coated.

**PHYSICAL PROPERTIES:**
- **Weight per Gallon:** 11.0 lbs.
- **Solids by Weight:** 62%
- **Solids by Volume:** 50%
- **Color:** Light Blue
- **Hardness Shore A:** 70
- **Elongation:** 400%
- **Tensile Strength:** 200 PSI
- **Weathering:** Excellent

**CAUTION:**
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

Cold-process systems and coating, either emulsion or solvent based, should only be installed on decks with positive drainage.

Per NRCA, (National Roofing Contractors Association, “The criteria for judging proper slope for drainage is that there be no evidence of standing water on the deck 48 hours after it stops raining.”

**CARE OF TOOLS:**
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak 405 Bond-N-Shield is a 100% elastomeric acrylic, co-polymer emulsion, specifically designed as a base coating that will provide excellent adhesion to asphalt surfaces. The coating contains stain blockers that prevent asphalt bleed through thus producing a brighter white coating over these surfaces. Technological advances in the Karnak laboratory also give this acrylic coating improved water blistering resistance in temporary ponding areas versus traditional acrylic coatings.

USES:
405 Bond-N-Shield is intended for use as a base coat prior to the application of, 501 Elasto-Brite, 529 Renu-White and 535QS Enviro-Lastic, topcoats on built-up roof surfaces that have aged a minimum of 90 days and SBS and APP smooth and granular modified membranes that have weathered 30 days.

SURFACE PREPARATION:
Surfaces to be coated should be dry, clean, and free of dirt, dust, grease, oil and loose paint. Power wash surfaces with 799 Wash-N-Prep Roof Cleaner and water. Wash roof surfaces with a minimum of 2000 psi., taking all necessary precautions to avoid damage to the roof system. Patch and repair cracks or holes with Karna-Flex WB and Resat-Mat or Poly-Mat or appropriate sealants or caulking materials. All wet insulation should be removed and replaced with like materials. New BUR roof surfaces must age a minimum of 90 days before coating. SBS and APP modified bitumen membranes should weather 30 days before coating.

APPLICATION:
Mix lightly prior to application of the coating. 405 Bond-N-Shield may be applied by brush, spray equipment or roller. For applications in higher temperatures (above 90 °F) Karnak recommends application in multiple thin coats to prevent trapped moisture problems. Commencement of work by the contractor implies his approval of the deck surface.

BRUSH / ROLLER APPLICATION:
Brush / roller application should be done applying the coating in the same direction. Apply the finish coat perpendicular to 405 Bond-N-Shield.

SPRAY APPLICATION:
Utilize a standard paint spray pump or airless spray pump. Equipment manufacturer should be consulted for more complete information. Spray application should be done with a 50% over-spray pattern.
COVERAGE RATE:
Apply 405 Bond-N-Shield over the surface at the rate of 1.5 gallons per 100 sq. ft. Allow dry 6-24 hours then apply the selected finish coating. The total dry mil thickness of 405 Bond-N-Shield and finish coating should be 20 to 24 mils. Coverage will vary depending on the surface to be coated.

PHYSICAL PROPERTIES:
Weight per Gallon: 11.4 lbs.
Solids by Weight: 62%
Solids by Volume: 50%
Color: Light Blue
Hardness Shore A: 60
Elongation: 800%
Tensile Strength: 100 PSI
Weathering: Excellent
Permeability: 3.0 Perms

CAUTION:
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

Roofing
Read Material Safety Data Sheets before using this product.

405 Bond-N-Shield (Asphalt Surface Base Coat)
CARE OF TOOLS:
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
406 Tru-Grip (TPO & PVC Base Coat)

DESCRIPTION:
Karnak 406 Tru-Grip is a 100% acrylic elastomeric co-polymer emulsion, specifically designed as a base coating for adhesion to weathered TPO, Hypolan, and PVC roofing membranes. When applied to a suitably cleaned, weathered TPO or PVC roof and top coated with a durable acrylic elastomeric topcoat such as 535 QS Enviro-Lastic, 501 Elasto-Brite or 529 Renu-White, the basecoat can extend the life of the existing roof membrane. The technology used in 406 Tru-Grip enables the coating to have very good adhesion and resistance to blistering when applied to weathered TPO and PVC.

USES:
Elastomeric Roof Coating Systems that use 406 Tru-Grip as the basecoat are ideal for use over aged TPO, Hypolan and PVC roofing membranes that have been weathered at least four years.

SURFACE PREPARATION:
Weathered TPO and PVC surfaces accumulate dirt over time and must be cleaned prior to coating with 406 Tru-Grip. It is particularly important to effectively clean ponded water areas where greater accumulations of dirt can occur. For optimal adhesion and water resistance, water alone is insufficient to clean weathered TPO and PVC membranes properly. Suitable liquid cleaners such as 507 SPC Primer/Wash and 799 Wash-N-Prep Roof Cleaner solutions with water can be spray applied over the entire surface followed by a thorough power washing. Power wash roof surfaces using a pressure of 2500 to 3500 psi with a wide fan tip. All residual cleaning agents must be removed, otherwise they will interfere in the adhesion of 406 Tru-Grip. When using liquid cleaning solutions, please refer to the specific product label and MSDS for safe handling information and proper use instructions.

APPLICATION:
Mix lightly prior to application of the coating. 406 Tru-Grip may be applied by brush, spray equipment or roller.

BRUSH / ROLLER APPLICATION:
Brush / roller application should be done applying the coating in the same direction. Apply the finish coat perpendicular to the base coat.

SPRAY APPLICATION:
Utilize a standard paint spray pump or airless spray pump. Equipment manufacturer should be consulted for more complete information. Spray application should be done with a 50% over-spray pattern.
406 Tru-Grip (TPO & PVC Base Coat)

**COVERAGE RATE:**
Apply 406 Tru-Grip over the surface at the rate of 1.5 gallons per 100 sq. ft. Allow 406 Tru-Grip to dry 8-24 hours before applying selected finish coating. The total dry mil thickness of 406 Tru-Grip and finish coating should be 20 to 24 mils. Coverage will vary depending on the surface to be coated.

**PHYSICAL PROPERTIES:**
- Weight Per Gallon: 11.3 lbs.
- Solids By Weight: 62%
- Solids by Volume: 50%
- Color: Light Blue
- Hardness Shore A: 65

**CAUTION:**
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.**

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**CARE OF TOOLS:**
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.
PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak 407 EPDM & SPF is a 100% acrylic elastomeric co-polymer emulsion, specifically designed as a base coating for adhesion to EPDM and SPF (Spray polyurethane foam) roofing membranes and systems. When applied to a suitably cleaned EPDM or SPF roofs and top coated with a durable acrylic elastomeric finish coat such as 535 QS Enviro-Lastic, 501 Elasto-Brite or 529 Renu-White, the coatings can extend the life of the existing roof membrane. The technology used in 407 EPDM & SPF enables the coating to have very good adhesion and resistance to blistering when applied to EPDM or SPF roofing systems.

USES:
407 EPDM & SPF is intended for use as an elastomeric base coat for application over properly prepared and clean EPDM and SPF roofing membranes and systems prior to the application of 535 QS Enviro-Lastic, 501 Elasto-Brite or 529 Renu-White finish coats. All surfaces must be properly cleaned, dry and leak free before coating. Suitable for horizontal and vertical applications.

SURFACE PREPARATION:
Surfaces to be coated should be dry, clean and free of dirt, dust, rust, grease, oil and loose coating. Power wash EPDM surfaces using 507 SPC Primer Wash and water and SPF surfaces with 799 Wash-N-Prep Roof Cleaner and water. Wash roof surfaces with a minimum of 2000 psi. taking all necessary precautions to avoid damage to the roof system. Patch and repair all cracks, leaks and damaged areas with appropriate sealants or caulking materials. All wet insulation and foam and/or exposed foam should be removed and replaced with like materials. 407 EPDM & SPF base coat must be dry prior to application of additional coatings.

APPLICATION:
Mix lightly prior to application of the coating. 407 EPDM & SPF may be applied by brush, spray equipment or roller.

BRUSH / ROLLER APPLICATION:
Brush / roller application should be done applying the coating in the same direction. Apply the finish coat perpendicular to the base coat.

SPRAY APPLICATION:
Utilize a standard paint spray pump or airless spray pump. Equipment manufacturer should be consulted for more complete information. Spray application should be done with a 50% over-spray pattern.
COVERAGE RATE:
Apply 407 EPDM & SPF over the surface at the rate of 1.5 gallons per 100 sq. ft. Allow 407 EPDM & SPF to dry 8-24 hours before applying selected finish coating. The total dry mil thickness of 407 EPDM & SPF and finish coating should be 20 to 24 mils. Coverage will vary depending on the surface to be coated.

PHYSICAL PROPERTIES:
- Weight Per Gallon: 11.3 lbs.
- Solids By Weight: 62%
- Solids by Volume: 50%
- Color: Light Pink
- Performance Temp. Range: -15°F to 180°F
- VOC Content: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

CAUTION:
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. **Do not thin.** Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE. PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

CARE OF TOOLS:
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.
Read Material Safety Data Sheets before using this product.

501 Elasto-Brite

DESCRIPTION:
Karnak 501 Elasto-Brite is a co-polymer elastomeric, 100% acrylic emulsion coating. 501 Elasto-Brite provides excellent protection, appearance, mildew resistance, color stability, weatherability and flexibility.

USES:
501 Elasto-Brite is designed to be applied directly over built-up roof surfaces that have aged a minimum of 90 days, SBS and APP granular modified membranes and smooth surface APP membranes that have weathered a minimum of 30 days as well as metal roofs. Also for use on above grade vertical surfaces such as concrete, concrete block, brick, stucco, metal and wood. May also be used for application over applicable base coats 405 Bond-N-Shield, 406 Tru-Grip, 404 Corrosion Proof Base and 407 EPDM & SPF as a base coat for EPDM. Meets ASTM D-6083.

SURFACE PREPARATION:
Surfaces to be coated should be dry, clean, free of dirt, dust, grease, oil and loose paint. Power wash surfaces with TSP substitute and water. Wash roof surfaces with a minimum of 2000 psi. taking all necessary precautions to avoid damage to the roof system. Patch and repair cracks or holes with appropriate sealants or caulking materials. All wet insulation should be removed and replaced with like materials. New BUR roof surfaces must age a minimum of 90 days before coating. Newly installed cold-process, hot-applied and torched-applied modified bitumen membranes should age 30 days before coating. Allow fresh masonry to cure a minimum of 30 days before application. 501 Elasto-Brite or subsequent base coats should be dry prior to application of 501 Elasto-Brite.

APPLICATION:
Mix lightly prior to application of the coating. 501 Elasto-Brite may be applied by brush, spray equipment or roller.

BRUSH / ROLLER APPLICATION:
Brush / roller application should be done perpendicular to the first coat/base coat for proper protection.

SPRAY APPLICATION:
Utilize a standard paint spray pump or airless spray pump. Equipment manufacturer should be consulted for more complete information. Spray application should be done with a 50% over-spray pattern.
COVERAGE RATE:
Apply 501 Elasto-Brite at the rate of 1.5 gallons per 100 sq. ft. per coat in a two coat application for a total coverage rate of 3 gallons per 100 sq.ft. This will achieve a dry mil thickness of 20 to 24 mils. Coverage will vary depending on the surface to be coated. Allow first coat to dry 4 to 12 hours before application of the second coat. Apply when temperatures are 40°F and rising but not over 100°F. Do not apply when rain is expected during or within 24 hours after application. Read the MSDS before using. For questions regarding repairs, surface preparation or request for an MSDS, please contact Karnak Technical Services at 800-526-4236.

ARCHITECTURAL COLORS:
White and gray are standard colors. Tan, Patina Green and Terra Cotta Red are available in quantities of 210 gallons minimum.

PHYSICAL PROPERTIES:
Weight Per Gallon: 11.8 lbs.
Solids By Weight: 65%
Solids by Volume: 52%
Color: White, Gray
Hardness Shore A: 70
Elongation: 300%
Meets and/or exceeds ASTM D-6083
Tensile Strength: 230 PSI
Weathering: Excellent
Permeability: 10 Perms
Performance
Service Temperature
Range: -15°F to 180°F
VOC: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

Cool Roof Rating Council (CRRC)
1. Solar Reflectance: Initial 0.86 3 year 0.77
2. Thermal Emittance: Initial 0.91 3 year 0.90
3. SRI: Initial 109 3 year 96
CAUTION:
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE. PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

CARE OF TOOLS:
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

When installed properly, this product will help reduce energy costs. Actual savings will vary based on geographical location and individual building characteristics. Consult your product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937) for more information.
DESCRIPTION:
Karnak #502 RC-W Elasto-Kote is a highly elastic, thermoplastic rubber based, single component exterior waterproofing coating.

USES:
Karnak #502 RC-W Elasto-Kote is intended for use on metal roofs, spray polyurethane foam roofs, EPDM, TPO, and most PVC roof membrane. Also good over previously coated surfaces as well as for coating concrete, concrete block, brick, cinder block, stucco and wood. **Do not apply over asphaltic surfaces.** PVC and TPO roofs should be at least 4 years old before coating.

SURFACE PREPARATION:
All roof surfaces to be coated should be clean and free of dirt, dust flaking and pitting rust, grease, oil, and loose paint. New masonry surfaces should be allowed to cure 30 days before application of coating. EPDM roof surfaces should be cleaned with #507 SPC Primer/Wash. Other single ply membranes should be cleaned with #799 Wash-N-Prep Roof Cleaner and water. Patch and repair all seams, flashings with Karna-Flex and Resat-Mat or 550 Patch-N-Go or appropriate sealants and caulking materials. Contact Karnak Technical Services at 800-526-4236 for questions regarding surface preparation.

APPLICATION:
Karnak #502 RC-W Elasto-Kote Base and Finish may be applied by brush, roller or spray equipment.

COVERAGE RATE:
Apply Karnak #502 RC-W Elasto-Kote Base at the rate of 1.5 gallons per 100 sq. ft. Allow base to dry 24 hours before applying #502 RC-W Elasto-Kote Finish at the rate of 1.5 gallons per 100 sq. ft. Coverage rate will vary due to texture and porosity of the surface. Film thickness should be approximately 24 mils dry. Karnak #502 RC-W Elasto-Kote Finish will take approximately 24 hours to cure. EPDM roofs should first be coated with 502 RC-W Base at the rate of 0.5 gallons per 100sq. ft. followed by two coats of 502- RC-W Elasto-Kote Finish at 1-1.5 gallons per 100sq. ft. per coat.

ARCHITECTURAL COLORS:
Standard colors are White and Gray. Tan, Terra Cotta Red and Patina Green available in quantities of 210 gallons minimum.

PHYSICAL PROPERTIES:
- Weight Per Gallon: 9.3 lbs.
- Permeability: 0.01 Perm
- Solids by Weight: 50%
- Solids by Volume: 40%
**502 RC-W Elasto Kote** (base & finish)

Color: White, Gray

Hardness Shore A: 65

Elongation: 650%

Tensile Strength: 1650 psi

Water Absorption (7 days): 0.4%

Dry Time (To Touch): 4 to 6 hours @ 77°F 50% relative humidity

Application Temperature Range: 40°F and rising

Service temperature Range: -15°F to 180°F

Cure Time: 12 to 24 hours @77°F 50% relative humidity

**Cool Roof Rating Council (CRRC)**

1. Solar Reflectance: Initial 0.85 3 year 0.72
2. Thermal Emittance: Initial 0.89 3 year 0.92
3. SRI: Initial 107 3 year 89

**CAUTION:**

Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. do not take internally. If swallowed, **do not induce vomiting.** Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. **Do not thin.** Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**CARE OF TOOLS:**

Tools may be cleaned with xylol, mineral spirits, lacquer solvents or Karna-Klean. Take necessary safety precautions when handling flammable materials.

**PACKAGING:**

Available in 5 gallon pails and 55 gallon drums.

NOTE: COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**If further information is needed, contact Karnak Technical Services at 1-800-526-4236.**

When installed properly, this product will help reduce energy costs. Actual savings will vary based on geographical location and individual building characteristics. Consult your product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937) for more information.

Please see page 222 for additional mold and safety information.
505HS Mohave-Coat

DESCRIPTION:
Karnak 505 Mohave-Coat is an acrylic co-polymer elastomeric roof coating. 505 Mohave-Coat provides excellent protection, appearance, mildew resistance, color stability, weather ability and flexibility.

USES:
505 Mohave-Coat is designed to be applied directly over built-up roof surfaces that have aged a minimum of 90 days, SBS and APP granular modified membranes and smooth surface APP membranes that have weathered a minimum of 30 days as well as metal roofs and SPF foam systems. Also for use on above grade vertical surfaces such as concrete, concrete block, brick, stucco, metal and wood. May also be used for application over applicable base coats 404 Corrosion Proof Base Coat, 405 Bond-N-Shield, 406 Tru-Grip, and 407 EPDM & SPF Base Coat.

SURFACE PREPARATION:
Surfaces to be coated should be dry, clean, and free of dirt, dust, grease, oil and loose paint. Power wash surfaces with TSP substitute and water. Wash roof surfaces with a minimum of 2000 psi. taking all necessary precautions to avoid damage to the roof system. Patch and repair cracks or holes with appropriate sealants or caulking materials. All wet insulation should be removed and replaced with like materials. New BUR roof surfaces must age a minimum of 90 days before coating. Newly installed cold-process, hot-applied and torched-applied modified bitumen membranes should age 30 days before coating. Allow fresh masonry to cure a minimum of 30 days before application. 505 Mohave-Coat or subsequent base coats should be dry prior to application of a finish 505 Mohave-Coat.

APPLICATION:
Mix lightly prior to application of the coating. 505 Mohave-Coat may be applied by brush, spray equipment or roller.

BRUSH / ROLLER APPLICATION:
Brush / roller application should be done perpendicular to the first coat/base coat for proper protection.

SPRAY APPLICATION:
Utilize a standard paint spray pump or airless spray pump. Equipment manufacturer should be consulted for more complete information. Spray application should be done with a 50% over-spray pattern.

COVERAGE RATE:
Apply 505 Mohave-Coat at the rate of 1.5 gallons per 100 sq. ft. per coat in a two coat application for a total coverage rate of 3 gallons per 100 sq.ft. Or apply one coat of 505 Mohave-Coat at the rate of 1.5 gallon per 100 sq. ft. overtop the previously applied Karnak base coat. This will achieve a dry mil thickness of 22 to 26 mils. Coverage will vary depending on the surface to be coated. Allow first coat to dry 4 to 12 hours before application of the second coat. Apply when...
temperatures are 50°F and rising but not over 100°F. Do not apply when rain is expected during or within 24 hours after application. Read the MSDS before using. For questions regarding repairs, surface preparation or request for an MSDS, please contact Karnak Technical Services at 800-526-4236.

**ARCHITECTURAL COLORS:**
White and Desert Tan are standard colors. Adobe Brown, Patina Green, and Terra Cotta Red are available in quantities of 210 gallons minimum.

**PHYSICAL PROPERTIES:**
- **Weight per Gallon:** 12 lbs.
- **Solids by Weight:** 71%
- **Solids by Volume:** 57%
- **Color:** White
- **Hardness Shore A:** 75
- **Elongation:** 210%
- **Tensile Strength:** 275 PSI
- **Weathering:** Excellent
- **Permeability:** 10 Perms
- **Performance**
- **Temp. Range:** -15°F to 180°F
- **VOC:** Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

Service Temperature: -15°F to 180°F  Application Temperature: 40°F and rising

**CAUTION:**
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE. PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**CARE OF TOOLS:**
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.

**If further information is needed, contact Karnak Technical Services at 1-800-526-4236.** When installed properly, this product will help reduce energy costs. Actual savings will vary based on geographical location and individual building characteristics. Consult your product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937) for more information.
505 Karna-Flex WB

DESCRIPTION:
Karna-Flex WB is an acrylic elastomeric, water-borne mastic formulated for use on built-up asphalt roofing, modified bitumen membranes and properly prepared, single-ply membranes (TPO, PVC, Hypalon, and EPDM) and plywood roof substrates. Its ease of application, superior adhesion, elasticity and durability make Karna-Flex WB an ideal repair sealant.

USES:
Karna-Flex WB’s elastomeric properties make it an excellent sealant for making repairs to built-up asphalt roofs, modified bitumen membrane roofs, prepared metal, concrete, spray polyurethane foam and plywood roof system details. Ideal for sealing flashings, curbs and waterproofing metal roof seams, gutters, fasteners, pinholes in metal and skylights. Excellent for sealing flashings on asphalt BUR roofs and modified bitumen membrane roofs. Ideal for sealing around penetrations and roof top equipment. Use in place of flashing cement for repairs to all types of asphalt roofs prior to applying white coatings.

FEATURES, BENEFITS AND ADVANTAGES:
1. White elastomeric sealant.
2. Easy application by brush or bulk loading caulking gun.
3. Excellent adhesion to many surfaces.
4. Sets up quick for coating over.
5. Low temperature flexibility—specially selected polymers and resins impart superior low temperature properties to the coating.
6. Low VOC, water-based, no odor.
7. Resistant to mold and mildew growth.
8. UV stable, may be left exposed.

SURFACE PREPARATION:
All surfaces to be sealed must be dry, clean and free from rust, loose coating and caulk, oil, grease and other foreign matter. Remove silicone or other sealants before using.

APPLICATION: General Repairs
Karna-Flex WB should be applied by stiff brush or bulk loading caulking gun, depending on the application. Apply sealer when temperatures are above 40°F and rain is not forecasted within 24 hours.

For sealing flashings and lap seams use fabric reinforcement between layers of Karna-Flex WB. Apply sealer in a 1/16” to 1/8” width then immediately embed Karnak 5540 Resat-Mat polyester fabric into the wet coating. Smooth out fabric then apply another layer of sealer. Some shrinkage may occur and require an additional application of Karna-Flex WB.

Read Material Safety Data Sheets before using this product.
For metal roofing follow these application guidelines:

1. **Horizontal Seams and Cracks 1/16” wide or larger.**
   - Using Karnak 550 Patch-N-Go Fleece Tape, adhere tape to crack as directed per product application guidelines. Apply Karna-Flex WB at an average thickness of 1/16” to completely cover the polyester face of the tape and feather out.
   - Using Karnak Resat-Mat, apply a 1/16” thick application of Karna-Flex WB then immediately embed one ply of Resat-Mat polyester fabric into the wet coating. Smooth out fabric then apply another layer of Karna-Flex WB.

2. **Screws/Fasteners, Vertical Seams and Cracks less than 1/16”**
   - Over screws and fasteners apply a dollop of Karna-Flex WB to completely enclose the screw/fastener with either a 2” wide brush or bulk loading caulking gun.
   - Over vertical seams and cracks less than 1/16” wide, back brush a minimum 2” wide application of Karna-Flex WB at an appropriate thickness of 1/16” to 1/8”.

Note: Allow to cure 24 hours before coating over, if desired. Not intended for use in ponding areas.

**PHYSICAL PROPERTIES:**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight per Gallon</td>
<td>11.8 lbs</td>
</tr>
<tr>
<td>%NV by Weight</td>
<td>70%</td>
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<tr>
<td>%NV by Volume</td>
<td>65%</td>
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<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>VOC</td>
<td>Please visit <a href="http://www.karnakcorp.com">www.karnakcorp.com</a> for latest VOC content as products are updated to comply with the most current VOC regulations</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>40 psi</td>
</tr>
<tr>
<td>Elongation</td>
<td>500%</td>
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<tr>
<td>Low Temp Flex</td>
<td>Pass / No Cracking</td>
</tr>
<tr>
<td>ASTM-C-734</td>
<td>75% min</td>
</tr>
<tr>
<td>Recovery</td>
<td></td>
</tr>
</tbody>
</table>
505 Karna-Flex WB

CAUTION:
Do not apply when rain is imminent. Protect from freezing. Sealant must be dried before exposure to water. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. KEEP OUT OF REACH OF CHILDREN. Keep container covered when not in use. Do not thin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying. Not for use on areas that pond water, roofs should have positive drainage.

PACKAGING:
2 gallon buckets.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.
**DESCRIPTION:**
Karnak Karna-Flex is an elastomeric, thermoplastic-rubber sealant formulated for use on properly prepared metal, concrete, EPDM, TPO, and most PVC membrane as well as spray polyurethane foam and plywood roof substrates. Its ease of application, superior adhesion, elasticity and durability make Karna-Flex an ideal repair sealant. Available in a brush mastic or caulking cartridge.

**USES:**
Karna-Flex’s elastomeric properties make it an excellent sealant for prepared metal, concrete, spray polyurethane foam and plywood roof system details. Ideal for sealing and waterproofing metal roof seams and splits, EPDM, TPO and PVC seams as well as gutters, fasteners, pinholes in metal, flashing and curb details. Also use to seal around skylights, penetrations and roof top equipment.

**FEATURES, BENEFITS AND ADVANTAGES:**
1. One component—no need to intermix with other materials.
2. Easy application by brush or caulking gun.
3. Superior film—forms a durable, weather resistant elastomeric membrane.
4. Has superior adhesive and cohesive strength.
5. Low temperature flexibility—specially selected polymers and resins impart super low temperature properties to the coating.

**SURFACE PREPARATION:**
All surfaces to be sealed must be clean, dry and free from oil, grease and other foreign matter.

**APPLICATION:**
Apply Karna-Flex by brush or caulking gun in the following manner.

1. Horizontal Seams and Cracks 1/16” wide or larger.
   - Using Karnak 550 Patch-N-Go Fleece Self Sealing Tape, adhere tape to crack as directed per production application guidelines. Apply Karna-Flex at an average thickness of 1/16” to completely cover the polyester face of the tape and feather out.
2. Or, using Karnak Resat-Mat, apply Karna-Flex at an average thickness of 1/16” to completely cover the crack. Immediately embed one layer of Resat-Mat and cover with another application of Karna-Flex. Make sure to smooth the fabric out completely and cover.

Product will cure within approximately 24 hours. If continuing with 502 Elasto-Kote System is desired, allow all repairs to cure before proceeding.

**PHYSICAL PROPERTIES:**

- Weight per Gallon: 9.7 lbs
- Maximum Shrinkage: 25%
- Colors: White & Black
- Tensile Strength: 40 psi
- Elongation: 500%
- Low Temp Flex: -40°F
- ASTM-C-734: No cracking/pass
- Recovery: 75% min.
- VOC: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

**NOTE:**

Karna-Flex is not recommended for use over asphaltic substrates. Contact Karnak Corporation for alternative systems. PVC and TPO roofs should at least be 4 years old before using this product on.

**CAUTION:**

Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. KEEP OUT OF REACH OF CHILDREN. Keep container covered when not in use. Do not thin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.
502 Karna-Flex

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

PACKAGING:
Karna-Flex: 3 Gallon Buckets
30 oz. Caulking Cartridges

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

507 SPC Primer/Wash (For EPDM Membranes)

DESCRIPTION:
Karnak 507 SPC Primer / Wash is a water-based cleaner designed to safely clean and prepare EPDM roof surfaces for subsequent coatings and repairs.

USES:
Karnak 507 SPC Primer / Wash is appropriate for use on new and weathered EPDM roof membranes.

SURFACE PREPARATION:
Surfaces should be free of all roof debris and in a water-tight condition.

APPLICATION:
Apply Karnak 507 SPC Primer / Wash via a sprayer (Hudson-type agricultural) to the entire roof at an application rate of 500 square feet per gallon (0.20 gal. / 100 sq.ft.). Use a 3-4 foot arc pattern. Allow 507 SPC Primer to stand for 10-15 minutes. Clean EPDM roof with a commercial power washer (between 2000-3500 psi). When cleaning the EPDM, it should be done slowly and close to the surface in order to remove mica and inorganic release agents. Start washing up the roof. Then, back down to completely remove all residues. Care should be taken to not damage the EPDM roof membrane. Use caution when walking on roof surfaces, as the may be extremely slick.

*Rinse thoroughly with power washer. The rinse step may be done at a faster pace then the cleaning step. In the final rinse water should be clear with no soap bubbles present. The EPDM membrane will range from muddy brown to black after washing with the 507 SPC Primer / Wash. When the surface is dry, coating may begin.

*Due to the rinse water possibly containing dirt, mold, mildew algae and diluted 507 SPC, do not allow rinse to flow into drains or sewers leading to open bodies of water (lakes, ponds, streams, etc.). Do not dispose of the neat 507 SPC product into drains, sewers or open bodies of water. Rinse water from downspouts could stain concrete parking lots and decks as it flows to municipal drains. Because of this, temporary hoses should be used to direct the rinse water.
507 SPC Primer/Wash (For EPDM Membranes)

**COVERAGE RATE:**
0.20 gallon per 100 sq. ft. (500 sq. ft. per gallon).

**PHYSICAL PROPERTIES:**
- Weight Per Gallon: 8.6 lbs.
- Color: Clear
- pH: Neutral

**CAUTION:**
Do not apply when rain is imminent. Protect from freezing. Store in a cool, dry place. Keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin and eyes. In case of eye contact, immediately flush with copious amounts of water for at least 15 minutes. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. Dispose of in an environmentally safe manner. Read Material Safety Data Sheets before using this product.

**CARE OF TOOLS:**
Spray equipment should be cleaned with clean water.

**PACKAGING:**
5-gallon pails & 1-gallon cans

If further information is required, please contact Karnak Technical Services Department at 800-526-4236.

Please see page 222 for additional mold and safety information.
529 Renu-White

DESCRIPTION:
Karnak 529 Renu-White is a polymer acrylic based elastomeric roof coating that affords the building owner the energy saving benefits of a highly reflective white coating while providing good resistance to UV degradation and the weather. This economical coating forms a highly elastic membrane to protect a variety of roof substrates.

USES:
Karnak 529 Renu-White is designed for application over built-up roof (BUR) surfaces that have aged a minimum of 90 days, SBS and APP granular and smooth modified membranes that have weathered a minimum of 30 days, aged aluminum coated roofs as well as metal roofs. Also may be applied to above grade vertical surfaces such as concrete, concrete block, brick, stucco and wood.

SURFACE PREPARATION:
All surfaces to be coated should be in sound condition and thoroughly cleaned and free of oil, grease, dust, dirt, debris and loose coating. Pressure wash with 799 Wash-N-Prep Roof Cleaner and water. Rinse surfaces well to remove all soapy residues and allow to dry completely. Metal surfaces must be wire brushed down to clean and stable surface. Repair all roof surfaces with appropriate materials prior to coatings. Read the MSDS before using. For questions regarding repairs, surface preparation or request for an MSDS, please contact Karnak Technical Services at 800-526-4236.

APPLICATION:
Mix product before applying. Apply Karnak 529 Renu-White in two thick coats at the rate of 1.5 gallons per 100 sq.ft. (32 wet mils) for a total coverage of 3.0 gallons per 100 sq.ft. or apply at the rate of 1.5 gallons per 100 sq.ft. over applicable Karnak base coat. Apply by roller or airless spray equipment. Do not thin coating. Apply each coat in one direction with the second coat applied perpendicular to the first/base coat. Allow first coat to dry 8 to 12 hours before application of the second coat. Do not apply when rain is expected during or within 24 hours after application.

COVERAGE RATE:
Two coats at 1.5 gallons per 100 sq.ft. per coat for a total coverage of 3.0 gallons per 100 sq.ft. or 1.5 gallons per 100 sq.ft. over previous applied Karnak base coat. Coverage varies with the irregularity and porosity of the roof surface.
529 Renu-White

PHYSICAL PROPERTIES:
- Weight per Gallon: 11.5 lbs.
- Solids by Weight: 63%
- Solids by Volume: 50%
- Initial Reflectivity (SR): 0.85 (85%)
- Initial Thermal Emittance (TE): 0.90 (90%)
- Color: White
- Elongation: 450% ASTM D-412
- Tensile Strength: 140 lbs./sq.ft. ASTM D-412
- Service Temp. Range: -15°F to 180°F
- Application Temperature: 40°F and rising
- VOC: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

Cool Roof Rating Council (CRRC)
1. Solar Reflectance: Initial 0.85 3 year 0.73
2. Thermal Emittance: Initial 0.90 3 year 0.88
3. SRI: Initial 107 3 year 90

CAUTION:
Do not apply when rain is imminent. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. Keep away from children. Use with adequate ventilation. Avoid prolonged contact with skin. Wash exposed areas promptly with soap and water. Flush eyes with copious amounts of water. Protect from freezing. Product must be dried before exposure to water. Do not thin. Store in a cool, dry place. Dispose of in an environmentally safe manner.

CARE OF TOOLS:
Clean tools with cool, soapy water immediately after use. Dry coating may be cleaned with mineral spirits or similar solvent. Take necessary precautions when handling combustible materials.

PACKAGING:
5-gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak 535 QS Enviro-Lastic is a 100% acrylic resin, white reflective, elastomeric coating with “Quick-Set” technology that locks the coating in to protect against rain wash-off 20 minutes after application. 535 QS Enviro-Lastic represents Karnak’s dedication to advancing acrylic coating technologies in the industry. This coating has superior color stability, resistance to dirt pickup, excellent hail resistance and low temperature flexibility.

**USES:**
535 QS Enviro-Lastic is for use directly over new clean metal, cured concrete, spray polyurethane foam, EPDM and Hypalon roof surfaces. Also for use as a finish coating over applicable base coats of 405 Bond-N-Shield, 406 Tru-Grip and 404 Corrosion Proof Base Coat. All surfaces must be properly cleaned, dry and leak free before coating. Suitable for horizontal and vertical applications. Metal surface must be completely free of rust or encapsulated with 404 base coat. Concrete surfaces must be cured 30 days before coating.

**SURFACE PREPARATION:**
Surfaces to be coated should be dry, clean and free of dirt, dust, rust, grease, oil and loose coating. Power wash surfaces with 799 Wash-N-Prep Roof Cleaner and water or if surface is an EPDM or Hypalon single-ply roof use 507 SPC Primer/Wash and water. Wash roof surfaces with a minimum of 2000 psi. taking all necessary precautions to avoid damage to the roof system. Patch and repair cracks or holes with appropriate sealants or caulking materials. All wet insulation or foam should be removed and replaced with like materials. Allow fresh masonry to cure a minimum of 30 days before application. 535 QS Enviro-Lastic or subsequent base coat must be dry prior to application of additional coatings.

**APPLICATION:**
Mix lightly just prior to using. 535 QS Enviro-Lastic may be applied by brush, spray equipment or roller.

**BRUSH / ROLLER APPLICATION:**
Brush/roller application should be done perpendicular to the base coat for proper protection. Do not over roll.

**SPRAY APPLICATION:**
Utilize a standard paint spray pump or airless spray pump. Equipment manufacturer should be consulted for more complete information. Spray application should be done with a 50% over-spray pattern.
535 QS Enviro-Lastic

COVERAGE RATE:
Apply 535 QS Enviro-Lastic at the rate of 1.5 gallons per 100 sq. ft. (24 wet mils) over previously applied coat of 535 QS Enviro-Lastic (if applying two coats of 535 QS Enviro-Lastic allow the first coat to dry 8-24 hours before application of the second coat) or appropriate base coating.

COLOR:
White

PHYSICAL PROPERTIES:
Weight Per Gallon: 12 lbs.
Solids By Weight: 66%
Solids by Volume: 52%
Color: White
Hardness Shore A: 75
Elongation: 140%
Tensile Strength: 350 PSI
Weathering: Excellent
Permeability: 12 Perms

Cool Roof Rating Council (CRRC)
1. Solar Reflectance: Initial 0.85 3 year 0.73
2. Thermal Emittance: Initial 0.89 3 year 0.89
3. SRI: Initial 107 3 year 90

CAUTION:
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE. PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION), “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”
CARE OF TOOLS:
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak 550 Patch-N-Go self-sealing tapes are composed of highly adhesive butyl rubber compounds with either a protective aluminum film, absorbent fleece or double-sided. These tapes were developed to quickly seal surfaces and stop the intrusion of moisture. The aluminum reinforced film tapes are self-protecting making them a true “One-Step” sealant product that’s available in White, Black or Silver. The aluminum film readily accepts solvent or acrylic based coatings and paints. The Fleece tape is ideal for use with metal roofing or single-ply roof applications as a seam and detail waterproofing fabric that bonds firmly to the surface. Double-Sided tape is great for sealing between metal-to-metal surfaces and to bond between seams of single ply roof membranes. Also use in creating seals for abutting and fastening mechanical equipment. Offers a high degree of vibration dampening. May also be molded to shape for custom sealing. The highly adhesive bond of 550 Patch-N-Go stays flexible in a wide range of temperatures for service use in all climates.

**FEATURES, BENEFITS AND ADVANTAGES:**
- Seals and waterproofs
- UV Stable – Can be left exposed (White, Black or Silver only)
- Bonds to many different roof surfaces and substrates.
- Easy release backing.
- Wide service temperature performance range.
- May be painted over - Bonds to solvent and acrylic based coatings and paints.
- Self-Healing
- VOC Free

**USES:**
Karnak 550 Patch-N-Go is designed for sealing seams, flashing curbs and making repairs on metal roof surfaces, single ply roofs and many other building and roof surfaces. Ideal for sealing ductwork, trailers, mobile homes, trucks, gutters and skylights. Also has excellent adhesion for sealing to EPDM, Hypalon, and most PVC and TPO roof surfaces as well as to concrete, gypsum boards, plastic, glass, wood, asphalt, Plexiglas and most other common building materials. Its ease of use allows for quick repair installations. 550 Patch-N-Go Double-Sided is designed for bonding and sealing metal structures as well as offering a degree of vibration dampening. Use to bond seams of single ply roof membranes and in creating seals for abutting and fastening mechanical equipment.
SURFACE PREPARATION:
All surfaces to be sealed should be dry, smooth, clean and free from dirt, dust, oxidized carbon dust, loose paint or coatings, oil, grease, rust, or other foreign matter. Clean single ply membrane surfaces with toluene, xylene, acetone or single ply manufacturer’s primer or splice wash. Clean metal with similar solvent or TSP substitute and water. Follow instructions and MSDS safety precautions of primer, wash or solvent manufacturer carefully when using.

APPLICATION:
After surface has been properly prepared, cut desired length of 550 Patch-N-Go. Remove silicone release liner and position over desired area. Apply the tape directly to the area exactly the first time. Trying to remove may damage the tape and roofing surface. Press down firmly with a cloth pad, finger pressure or roller making sure tape stays conforming to the roof surface as you smooth out on to the surface. Edges should be free of fishmouths and tunnels. 550 Patch-N-Go White, Black or Silver may be coated over the same day, if desired. 550 Patch-N-Go Fleece should be coated over immediately. 550 Patch-N-Go Double-Sided is not meant to be exposed directly to the environment.

PHYSICAL PROPERTIES:
Appearance: Gray sealant (Double-Sided) or gray sealant with either a thin aluminum film (White, Black, Silver) or White Fleece
Thickness: 35 mils (+/- 2 mils)
Bonding Time: Immediate, full bond within 24 hours
Peel Adhesion 90º: 16 lbs. ASTM D 1000
Loop Tack Test: 16 lbs. ASTM D 6195
Application Temp: 32ºF to 115ºF
Service Temp: -40ºF to 210ºF

CAUTION:
Surfaces must be clean, free of moisture and contaminants. Keep out of reach of children. Read manufacturer’s Material Safety Data Sheet before using. For professional use only.
550 Patch-N-Go (Self-Sealing Tapes)

**PACKAGING:**

<table>
<thead>
<tr>
<th>Material</th>
<th>Sizes/Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>550 Fleece</td>
<td>4” x 65.5’ rolls (8 per box)</td>
</tr>
<tr>
<td>550 White</td>
<td>4” x 65.5’ rolls (8 per box)</td>
</tr>
<tr>
<td></td>
<td>6” x 65.5’ rolls (8 per box)</td>
</tr>
<tr>
<td></td>
<td>12” x 65.5’ rolls (4 per box)</td>
</tr>
<tr>
<td>550 Black</td>
<td>4” x 65.5’ rolls (8 per box)</td>
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<tr>
<td></td>
<td>6” x 65.5’ rolls (8 per box)</td>
</tr>
<tr>
<td></td>
<td>12” x 65.5’ rolls (4 per box)</td>
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<tr>
<td>550 Silver</td>
<td>4” x 65.5’ rolls (8 per box)</td>
</tr>
<tr>
<td>550 Double-Sided</td>
<td>1” x 33’ rolls (20 per box)</td>
</tr>
<tr>
<td></td>
<td>2” x 33’ rolls (12 per box)</td>
</tr>
</tbody>
</table>

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak 560 KARNA-Bond self-sealing tapes are composed of highly adhesive micro-sealant non-curing rubber with a built-in-primer. These tapes were developed to quickly seal surfaces and stop the intrusion of moisture. The Tri-layer TPO reinforced film tapes are self-protecting making them a true “One-Step” sealant product that’s available in White, Black or Silver. The Fleece only film readily accepts solvent or acrylic based coatings and paints. The Fleece tape is ideal for use with metal roofing or single-ply roof applications as a seam and detail waterproofing fabric that bonds firmly to the surface. Double-Sided tape is great for sealing between metal-to-metal surfaces and to bond between seams of single ply roof membranes. Also use in creating seals for abutting and fastening mechanical equipment. Offers a high degree of vibration dampening. May also be molded to shape for custom sealing. The highly adhesive bond of 560 KARNA-Bond stays flexible in a wide range of temperatures for service use in all climates. White, Black and Silver should not be coated over.

FEATURES, BENEFITS AND ADVANTAGES:
1. Seals and waterproofs
2. UV Stable – Can be left exposed (White, Black or Silver only)
3. Bonds to many different roof surfaces and substrates.
4. Easy release backing.
5. Wide service temperature performance range.
6. Bonds to fully-adhered solvent and acrylic based coatings and paints.
7. Self-Healing
8. VOC Free
9. Fleece Faced Karna-Bond may be coated.

USES:
Karnak 560 KARNA-Bond is designed for sealing seams, flashing curbs and making repairs on metal roof surfaces, single ply roofs and many other building and roof surfaces. Ideal for sealing ductwork, trailers, mobile homes, trucks, gutters and skylights. Also has excellent adhesion for sealing to EPDM, Hypalon, and most PVC and TPO roof surfaces as well as to concrete, gypsum boards, plastic, glass, wood, asphalt, Plexiglas and most other common building materials. Its ease of use allows for quick repair installations. 560 KARNA-Bond Double-Sided is designed for bonding and sealing metal structures as well as offering a degree of vibration dampening. Use to bond seams of single ply roof membranes and in creating seals for abutting and fastening mechanical equipment.

Note: Not intended for Asphaltic Surfaces.

KARNAK
330 CENTRAL AVENUE, CLARK, NJ 07066
732-388-0300 • 800-526-4236 • FAX: 732-388-9422
WEB: http://www.karnakcorp.com
SURFACE PREPARATION:
All surfaces to be sealed should be dry, smooth, clean and free from dirt, dust, oxidized carbon dust, loose paint or coatings, oil, grease, rust, or other foreign matter. Clean single ply membrane surfaces with toluene, xylene, acetone or single ply manufacturer’s primer or slice wash. Clean metal with similar solvent or TSP substitute and water. Follow instructions and MSDS safety precautions of primer, wash or solvent manufacturer carefully when using.

APPLICATION:
After surface has been properly prepared, cut desired length of 560 KARNA-Bond. Remove silicone release liner and position over desired area. Apply the tape directly to the area exactly the first time. Trying to remove may damage the tape and roofing surface. Press down firmly with a cloth pad, finger pressure or roller making sure tape stays conforming to the roof surface as you smooth out on to the surface. Edges should be free of fishmouths and tunnels. 560 KARNA-Bond Fleece should be coated over immediately. 560 KARNA-Bond Double-Sided is not meant to be exposed directly to the environment.

PHYSICAL PROPERTIES:
Appearance: Gray sealant (Double-Sided) or gray sealant with either a thin aluminum film (White, Black, Silver) or White Fleece
Thickness: 30 mils (+/- 2 mils) Double-Sided and Fleece only
               20 mils (+/-2 mils) Silver, White, and Black only
Bonding Time: Immediate, full bond within 24 hours
Peel Adhesion 90º: 17 lbs. ASTM D 1000
Application Temp: 32°F to 115°F
Service Temp: -40°F to 210°F

CAUTION:
Surfaces must be clean, free of moisture and contaminants. Keep out of reach of children. Read manufacturer’s Material Safety Data Sheet before using. For professional use only.
## 560 KARNA-Bond (Self-Sealing Tapes)

### PACKAGING:

<table>
<thead>
<tr>
<th>Material</th>
<th>Sizes</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>560 Fleece</td>
<td>2” x 50’</td>
<td>(12 per box)</td>
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<tr>
<td></td>
<td>4” x 50’</td>
<td>(6 per box)</td>
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<td>6” x 50’</td>
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<td>12” x 50’</td>
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<tr>
<td></td>
<td>24” x 50’</td>
<td>(1 per box)</td>
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<tr>
<td>560 White</td>
<td>4” x 50’</td>
<td>(6 per box)</td>
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<td>6” x 50’</td>
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<tr>
<td>560 Silver</td>
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<td>560 Double-Sided</td>
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<td>(12 per box)</td>
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</tbody>
</table>

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.
**DESCRIPTION:**
Karnak 670HS Karna-Sil Ultra is a white, single component, high solids, moisture curing silicone coating that produces a durable elastic coating with exceptional weathering and water resistance characteristics.

**USES:**
670HS Karna-Sil Ultra is ready to use right from the container as a protective coating directly over spray polyurethane foam. 670HS Karna-Sil Ultra may also be applied directly over silicone coated SPF roof as soon as the surface is power-washed clean and dry without the use of 180 Karna-Sil Epoxy Primer. Over Metal, built-up asphalt (BUR), modified bitumen membrane, concrete, masonry, TPO, PVC, Hypalon and EPDM surfaces you must prime first with 180 Karna-Sil Epoxy Primer before applying coating. Coating may be used on vertical as well as horizontal applications. All surfaces must have positive drainage.

**SURFACE PREPARATION:**
Surfaces to be coated should be dry, clean, and free of dirt, dust, grease, oil and loose rust or coating. Power wash surfaces with 799 Wash-N-Prep Roof Cleaner or 507 SPC Primer/Wash (EPDM Only) and water. Wash roof surfaces with a minimum of 2000 psi. taking all necessary precautions to avoid damage to the roof system. Patch and repair all seams, flashings, damaged areas, leak and cracks with Karna-Flex WB, Karna-Flex, 550 Patch-N-Go self sealing tape or appropriate sealants or caulking materials.

**APPLICATION:**
Karnak 670HS Karna-Sil Ultra can be applied in a single coat application (Material warranty only), or a multi-coat application (Required for Labor & Material Warranties). Allow first coat to cure 2-8 hours before applying second coat (dependant upon temperature and humidity). Subsequent coats should be applied within 24 hours of prior applications to insure uniform adhesion. Applied coating film should be even and free of pinholes. Coverage will vary depending on the surface to be coated. To improve aesthetics, impact resistance and toughness of the coating, ceramic roofing granules should be applied immediately into the top coat after application. Back-roll granules in, allow coating to cure then blow off or vacuum loose granules.
Mix coating prior to application with a 3” diameter mixer (5-gallon pail) or 6” diameter mixer (55 gallon drum). Once product is mixed, the entire container should be used. 670HS Karna-Sil Ultra may be applied by brush, roller or airless spray equipment. Apply at temperatures 50°F and rising. Do not apply if rain is expected within 24 hours after application. Commencement of work by the
contractor implies his approval of the roof surface.

**SPRAY APPLICATION:**
For spray application, a high-pressure airless spray unit with a minimum of 3500 psi working pressure at the gun tip should be used. The pump must have a 3 gallon per minute output. Hoses should be jacketed for prevention of moisture contamination. Hoses should have a ¾” ID and tip size should be a minimum size 0.030 orifice. Do not use with hoses that have been used to spray acrylic coatings.

**COVERAGE RATE:**
Single Coat: Apply at 1.5 gallon per 100 square feet (25 dry mils)
Multi-Coat: Apply each coat at 1.5 gallon per 100 square feet (25 dry mils x number of coats)

**SPECIFICATIONS:**
ASTM D-6694

**PHYSICAL PROPERTIES:**
- Weight per Gallon: 10.7 lbs.
- Solids by Weight: 96% ASTM D-1644
- Solids by Volume: 96% ASTM D-22697
- Color: White
- Reflectivity:
  - Initial: 0.87 ASTM C-1549
  - Aged: 0.70 ASTM C-1549
- Emissivity:
  - Initial: 0.89 ASTM C-1371
  - Aged: 0.90 ASTM C-1371
- Initial SRI: 110
- Aged SRI: 86
- Hardness Shore A: 50 ASTM D-2240
- Elongation:
  - 192% at 73°F ASTM D-2370
  - 216% at 0°F ASTM D-2370
- Tensile Strength:
  - 331 PSI at 73°F ASTM D-2370
  - 432 PSI at 0°F ASTM D-2370
- Application temperature: 40°F and rising
- Storage temperature: 50°F - 90°F. Dry environment
- Permeance: 5.9 perms ASTM E-96
- Service Temperature: -15°F to 180°F
- Cure Time: 2-8 hrs.
  (Temp. & Humidity Dependent)

**Cool Roof Rating Council (CRRC)**
1. Solar Reflectance: Initial 0.87 3 year 0.70
2. Thermal Emittance: Initial 0.89 3 year 0.90
670HS Karna-Sil Ultra (High Solids Silicone Coating)

3. SRI: Initial 110            3 year 86
    Shelf Life (Unopened):      6 months
                                   (Stored at 35°F - 75°F)

VOC Content: Please visit www.karnakcorp.com for
latest VOC content as products are
updated to comply with the most
current VOC regulations

CAUTION:
Pumping equipment should be grounded to avoid accidental ignition due to
static sparks. Avoid breathing solvent vapors. Use with appropriate
MESA/NIOSH approved respirator when exposure can exceed recommended
PEL. Not for interior use. Do not apply when rain is imminent. Keep containers
properly sealed when stored indoors, in a cool well-ventilated area. Keep
containers away from moisture. Keep away from heat, sparks and open flame. Do
not store above 100°F. Do not thin. Keep out of reach of children. Avoid
prolonged contact with skin. Dispose of in an environmentally safe manner. Cover
air intakes during application and while drying. Please refer to MSDS for more
safety information.

COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT
BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE
CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO
EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT
STOPS RAINING.”

CARE OF TOOLS:
While material is still wet, tools and spray equipment may be cleaned with
mineral spirits or VM&P Naptha. Do not leave coating in spray guns, pump
equipment and hoses. Take necessary precautions when handling flammable materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums

APPROVED BY:

If further information is needed, contact Karnak Technical Services
at 1-800-526-4236.
DESCRIPTION:
Karnak 670 Karna-Sil is a white, Low-VOC single component, moisture curing silicone coating that produces a durable elastic coating with exceptional weathering and water resistance characteristics.

USES:
670 Karna-Sil is ready to use right from the container as a protective coating directly over spray polyurethane foam. 670 Karna-Sil may also be applied directly over silicone coated SPF roof as soon as the surface is power-washed clean and dry without the use of 180 Karna-Sil Epoxy Primer. Over Metal, built-up asphalt (BUR), modified bitumen membrane, concrete, masonry, TPO, PVC, Hypalon and EPDM surfaces you must prime first with 180 Karna-Sil Epoxy Primer before applying coating. Coating may be used on vertical as well as horizontal applications. All surfaces must have positive drainage.

SURFACE PREPARATION:
Surfaces to be coated should be dry, clean, and free of dirt, dust, grease, oil and loose rust or coating. Power wash surface with 799 Wash-N-Prep Roof Cleaner or 507 SPC Primer/Wash (EPDM Only) and water. Wash roof surfaces with a minimum of 2000 psi, taking all necessary precautions to avoid damage to the roof system. Patch and repairs all seams, flashings, damaged areas, leak and cracks with any or a combination of the following: Karna-Flex WB, Karna-Flex, 550 Patch-N-Go self sealing tape or appropriate sealants or caulking materials.

APPLICATION:
Karnak 670HS Karna-Sil (low VOC Silicone Coating) can be applied in a single coat application (Material warranty only), or a multi-coat application (Required for Labor & Material Warranties). Allow first coat to cure 2-8 hours before applying second coat (dependant upon temperature and humidity). Subsequent coats should be applied within 24 hours of prior applications to insure uniform adhesion. Applied coating film should be even and free of pinholes. Coverage will vary depending on the surface to be coated. To improve aesthetics, impact resistance and toughness of the coating, ceramic roofing granules should be applied immediately into the top coat after application. Back-roll granules in, allow coating to cure then blow off or vacuum loose granules.
670 Karna-Sil (Low VOC Silicone Coating)

Mix coating prior to application with a 3” diameter mixer (5-gallon pail) or 6” diameter mixer (55 gallon drum). Once product is mixed, the entire container should be used. 670 Karna-Sil may be applied by brush, roller or airless spray equipment. Apply at temperatures 50°F and rising. Do not apply if rain is expected within 24 hours after application. Commencement of work by the contractor implies his approval of the roof surface.

SPRAY APPLICATION:
For spray application, a high-pressure airless spray unit with a minimum of 3500 psi working pressure at the gun tip should be used. The pump must have a minimum output of 3 gallons per minute. Hoses should be jacketed (BUNA-N) for prevention of moisture contamination. Hoses should have a ¾” ID and tip size should be a minimum size 0.030 orifice. Do not use with hoses that have been used to spray acrylic coatings.

COVERAGE RATE:
Single Coat: Apply at 1.5 gallon per 100 square feet (22 dry mils)
Multi-Coat: Apply each coat at 1.5 gallon per 100 square feet (22 dry mils x number of coats)

SPECIFICATIONS:
ASTM D-6694

PHYSICAL PROPERTIES:
Weight per Gallon: 10.7 lbs.
Solids by Weight: 80% ASTM D-1644
Solids by Volume: 70 % ASTM D-22697
Color: White
Reflectivity
  Initial: 0.85 ASTM C-1549
  Aged: 0.66 ASTM C-1549
Emissivity
  Initial: 0.85 ASTM C-1371
  Aged: 0.90 ASTM C-1371
Initial SRI: 106
Aged SRI: 80
Hardness Shore A: 50 ASTM D-2240
Elongation:
  267% at 73°F ASTM D-2370
  282% at 0°F ASTM D-2370
Tensile Strength:
  486 PSI at 73°F ASTM D-2370
  700 PSI at 0°F ASTM D-2370
Permeance: 5.9 perms ASTM E-96

Read Material Safety Data Sheets before using this product.
670 Karna-Sil (Low VOC Silicone Coating)

Cool Roof Rating Council (CRRC)
1. Solar Reflectance: Initial 0.87 3 year 0.70
2. Thermal Emittance: Initial 0.89 3 year 0.90
3. SRI: Initial 110 3 year 86

Service Temperature: -80°F to 350°F
Cure Time: 2-8 hrs. (Temp. & Humidity Dependent)
Shelf Life (Unopened): 6 months (Stored at 35°F - 75°F)
Application Temperature: 40°F and rising
Service Temperature: -15°F - 180°F
VOC Content: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

CAUTION:
Pumping equipment should be grounded to avoid accidental ignition due to static sparks. Avoid breathing solvent vapors. Use with appropriate MESA/NIOSH approved respirator when exposure can exceed recommended PEL. Not for interior use. Do not apply when rain is imminent. Keep containers properly sealed when stored indoors, in a cool well-ventilated area. Keep containers away from moisture. Keep away from heat, sparks and open flame. Do not store above 100°F. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying. Please refer to MSDS for more safety information.

COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, ( NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”
670 Karna-Sil (Low VOC Silicone Coating)

CARE OF TOOLS:
While material is still wet, tools and spray equipment may be cleaned with mineral spirits or VM&P Naptha. Do not leave coating in spray guns, pump equipment and hoses for prolonged periods. Take necessary precautions when handling flammable materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.
DESCRIPTION:
Karnak 702 K-Prep is a 100% acrylic elastomeric co-polymer emulsion, specifically designed as a primer for improving adhesion to weathered Kynar® coated metal roofing. When applied to a suitably cleaned, weathered Kynar® coated metal roof and coated with a durable acrylic elastomeric base coat such as 404 Corrosion Proof Base Coat and finish coat such as 535 QS Enviro-Lastic, 501 Elasto-Brite or 529 Renu-White, the coating system can extend the life of the existing roof. The technology used in 702 K-Prep imparts very good adhesion and resistance to blistering over a surface that traditionally has been difficult to bond to.

USES:
Elastomeric Roof Coating Systems that use 702 K-Prep primer are ideal for use over Kynar® coated metal roofs that have been weathered at least four years.

SURFACE PREPARATION:
Weathered Kynar® coated metal roofing surfaces accumulate dirt over time and must be cleaned prior to coating with 702 K-Prep. It is particularly important to effectively clean ponded water areas where greater accumulations of dirt can occur. For optimal adhesion and water resistance, water alone is insufficient to clean weathered Kynar® coating properly. Suitable liquid cleaners such as 799 Wash-N-Prep Roof Cleaner can be spray applied over the entire surface followed by a thorough power washing. Power wash roof surfaces using a pressure of 2500 to 3500 psi with a wide fan tip. All residual cleaning agents must be removed; otherwise they will interfere in the adhesion of 702 K-Prep. When using liquid cleaning solutions, please refer to the specific product label and MSDS for safe handling information and proper use instructions.

APPLICATION:
Mix lightly prior to application of the primer. 702 K-Prep may be applied by brush, spray equipment or roller.

BRUSH / ROLLER APPLICATION:
Brush/roller application should be done applying the primer evenly over the surface.

SPRAY APPLICATION:
Utilize a standard paint spray pump or airless spray pump. Equipment manufacturer should be consulted for more complete information. Spray application should be done with a 50% over-spray pattern.
702 K-Prep (Self-priming base coat over Kynar® coated metal)

**COVERAGE RATE:**
Apply 702 K-Prep over the surface at the rate of 0.5 gallon per 100 sq. ft. Allow 702 K-Prep to dry 2 - 4 hours before applying 404 Corrosion Proof Base Coat or selected finish coating. All applied primer should be coated over the same day for the best inter-coat adhesion. Coverage will vary depending on the surface to be coated.

**PHYSICAL PROPERTIES:**
- Weight per Gallon: 9.8 lbs.
- Solids by Weight: 47%
- Solids by Volume: 38%
- Color: Light Green
- VOC Content: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

**CAUTION:**
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**CARE OF TOOLS:**
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.
Preparation and Application Guidelines:

1. All fasteners should be re-tightened or replace as necessary. Stripped fasteners must be replaced with larger fasteners. All fasteners must include a neoprene washer.

2. The roof should be power washed with TSP substitute and water maintaining a pressure of 3000 – 3500 psi of working pressure. This should remove dirt, dust, and waste products, i.e. grease, animal fats, solvents, loose roofing products and any air borne pollutants.

3. Rusted through panels or sections must be replaced.

4. Heavily rusted areas must be wired brushed down to clean, stable metal.

5. All horizontal seams must be treated in one of the following ways:

Option 1: Using Karnak 4” Resat-Mat:
   a. Apply a base coat of Karnak 229AR-Elastomeric Trowel Grade at a 1/16” nominal thickness by 6” width. Apply 229AR with a 3” or 4” brush cut halfway down to stiffen bristles.
   b. With the coating still wet, completely embed 4” Resat-Mat in the 229AR. Resat-Mat must be kept smooth. There can be no wrinkles, fish mouths or bridging of the mat. If these conditions exists, these areas must be cut out and reinstalled.
   c. Apply another coat of 229AR at a 1/16” nominal thickness to completely cover the Resat-Mat and feather out. Total coverage of the 229AR is 25 lineal foot per gallon when applied 6” wide @ 1/8” total thickness. Work should be free of pinholes or loose strands of mat. No mat should be visible. Coverage rate will vary with substrate irregularity.

Option 2: Using Karnak 4” 550 Patch-N-Go Fleece Tape:
   a. Peel back the release sheet and apply 550 Patch-N-Go Fleece Tape exactly to the horizontal seam. Try not to remove as this may damage the seam sealing tape. Do not stretch tape.
   b. Press down firmly starting at the center and working towards the outside edge, removing bubbles. Slight wrinkling should not affect the performance of the seal. Edges must be free of fishmouths, uplifts and tunnels.
   c. Press firmly where tape goes over any fasteners.
d. Finish seam by applying 229AR Trowel Grade over the taped seam. Apply 229AR at a 1/16” nominal thickness to completely cover the Fleece Tape and feather out. Total coverage of the 229AR is 50 lineal foot per gallon when applied 6” wide @ 1/16” total thickness.

6. All vertical seams, if tight, should only receive a 2” wide application of Karnak 229AR-Elastomeric Trowel Grade. If seams are open, follow treatment for horizontal seams as described above. A good rule of thumb is if you can slip a credit card in the seam then it needs seam tape.

7. Any fasteners in the field of the roof not already protected as part of a seam detail must receive a dollop (swirl coat) of Karnak 229AR-Elastomeric Trowel grade to completely enclose the fastener. Coverage of 229AR is approximately 250 fasteners per gallon.

8. All protrusions should be flashed and detailed with 229AR-Elastomeric and Resat-Mat / 550 Patch-N-Go Fleece Tape, following good roofing practices and roofing industry standards. Resat-Mat or 550 Patch-N-Go Fleece Tape may be overlapped by 1” for addressing wider repairs.

9. Allow all repairs and seam details with 229AR to cure for 24-48 hours.

10. Finally, apply Karnak 298 Alumin-R at a rate of 1.5 – 2 gallons per 100 square feet. Allow to cure 24 hours.

Note: Field measurements are essential because actual square footage of corrugated roofs are more than conventional flat roofs. There could be as much as a 20% difference in the total square footage.

MATERIALS LIST:

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>COVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>229 AR Trowel Grade Fasteners:</td>
<td>250 Fasteners per gallon</td>
</tr>
<tr>
<td>Vertical Seams:</td>
<td>80 lineal feet per gallon</td>
</tr>
<tr>
<td>Horizontal Seams:</td>
<td>25 lin.ft. per gallon with Resat-Mat</td>
</tr>
<tr>
<td></td>
<td>50 lin.ft. per gallon with 550 Patch-N-Go</td>
</tr>
<tr>
<td>4” Resat-Mat</td>
<td>4” x 300’ per roll</td>
</tr>
<tr>
<td>550 Patch-N-Go Fleece Tape:</td>
<td>4” x 65.5’ per roll</td>
</tr>
<tr>
<td>298 Alumin-R:</td>
<td>1.5 - 2 gallons per 100 sq.ft.</td>
</tr>
</tbody>
</table>

The above specification is offered as a service to the specifier. Karnak Corporation does not practice architecture nor engineering and recommends that you consult a registered architect, engineer and/or roofing consultant.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak 229AR-Elastomeric is a single component, SBS rubber reinforced asphalt which forms a highly elastomeric roof coating barrier. 229AR has excellent elongation properties, good cold weather pliability and excellent water and weather resistance.

FEATURES, BENEFITS AND ADVANTAGES:
1. Easy to apply: Comes in Brush or Trowel Grades
2. Tough, flexible, elastic, rubber-like film.
3. Excellent adhesion to most surfaces including primed concrete, masonry, metal, asphalt, modified bitumen membranes and spray polyurethane foam roofing.
4. Excellent water and water vapor resistance.
5. Excellent weather resistance.
6. Once component, needs no intermixing.
7. Good resistance to salts and alkalies.
8. Compatible with many highway and bridge specifications.

USES:
Karnak 229AR Elastomeric is available in BRUSH, TROWEL or CAULK grades. Brush grade may be used on BUR, SBS or APP modified bitumen membranes, concrete, and spray polyurethane foam as a protective coating. Trowel grade can be used to make repairs on BUR, SBS or APP modified bitumen membranes, concrete, spray polyurethane foam and metal. Caulk grade is ideal for sealing on asphalt surfaces as well as masonry, metal, spray polyurethane foam, wood, stone, brick and concrete.

SURFACE PREPARATION:
Surfaces must be clean, dry and free from oil, grease, release agents, laitance, dirt, dust and debris. For 229AR Brush grade, all surfaces should be patched and repaired with 229AR Trowel or caulk prior to application.

APPLICATION:
Trowel Grade – Apply to either vertical or horizontal surfaces using a smooth edge trowel. Coverage will vary depending on the desired thickness. To achieve a 1/16” thickness apply at the rate of 4 gallons per 100 sq. ft.; 1/8” thickness apply at the rate of 8 gallons per 100 sq. ft.; ¼” thickness apply in two coats at the rate of 8 gallons per 100 sq. ft. per coat.
Brush Grade – Mix thoroughly just prior to using. Apply to roof surfaces with a fiber roof brush at the rate of 3 to 4 gallons per 100 sq. ft. Coverage will vary depending on the irregularity and porosity of the roof surface.

Caulk Grade – Apply directly in and over cracks using a standard caulking gun. An application rate of ¼” x ¼” bead of caulk will yield approximately 75 linear feet per 30 oz. caulking cartridge. Coverage may vary depending on desired thickness and surface being caulked.

SPECIFICATIONS: ASTM D-4586 Type I (Trowel & Caulk Grade)
ASTM D-4479 Type I (Brush Grade)
ASTM D-3409

PHYSICAL PROPERTIES:
Weight Per Gallon: 8.6 lbs.
Hardness, Shore A: 55 ASTM D-2240
Elongation: 350% ASTM D-412
Tensile Strength, PSI: 400 ASTM D-412
Color: Black
Water Vapor Permeance: 0.017 perm ASTM E-96
Air Permeability (Leakage): 0.000 L/(s·m²) @ pressure difference of 75 Pa
Service Temp. Range: -40°F to 160°F
Solids: Trowel 70%, Brush 63%, Spray 60%
ASTM D-2697
VOC Content: www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

CAUTION:
CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with 709 Karna-Klean. Mineral spirits or similar solvent may also be used, taking necessary precautions when handling combustible material.

PACKAGING:
Available in 1 gallon, 3 gallon & 5 gallon pails, 55 gallon drums and 30 oz. caulkking cartridges.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak #298 Alumin-R is a single component, SBS rubber modified asphalt, and is specially formulated with aluminum pigment to be used as a reflective elastomeric coating with modified bitumen membranes, B.U.R., properly sloped residential concrete roofs and metal surfaces. The strength and elastomeric qualities of Karnak #298 Alumin-R combined with its reflective properties, enhance the coating’s ability to resist movement. Karnak #298 Alumin-R provides the membrane with good weathering and elongation properties and reduces roof surface temperatures.

**FEATURES, BENEFITS AND ADVANTAGES:**
1. Easy to apply.
2. 24 hour cure.
3. Tough, flexible elastic, rubber-like film.
4. Excellent adhesion over clean asphalt surfaces.
5. Excellent water and water vapor resistance.
6. Excellent weather resistance.
7. Good resistance to salts and alkalies.
8. Aluminum reflectant characteristics.

**USES:**
Karnak #298 Alumin-R is recommended as a coating for on modified bitumen membranes, BUR, metal and mobile home roofs.

**SURFACE PREPARATION:**
All surfaces to be coated with Karnak #298 Alumin-R must be clean, dry, free from oil, grease, and loose debris. New asphalt roof surfaces may be coated with Karnak #298 Alumin-R five days after their installation.

Modified bitumen membranes should be coated immediately after the membrane has been laid into place. Metal roofs should be cleaned with a power washer using a minimum of 3000-3500 psi to remove rust and loose flaking prior to the application of Karnak #298 Alumin-R. Karnak #298 Alumin-R should be mechanically mixed for several minutes before application.

**APPLICATION:**
Karnak #298 Alumin-R can be applied by soft roof brush, roller or spray. If spray equipment is utilized, use a standard heavy duty spray pump. Equipment manufacturer should be consulted for more complete information.
Metal Roofing/Cold Process

298 Alumin-R

**COVERAGE RATE:**
Recommended rate of 1.5 to 2 gallons per 100 sq. ft. in one application.

**PHYSICAL PROPERTIES:**
- Weight per Gallon: 8.5 lbs.
- Solids by Weight: 65%
- Color: Silver
- Cure Time: 24 to 48 hrs.
- Performance Temp. Range: -40°F to 180°F
- Elongation: 300% D-412
- Tensile Strength: 350 psi D-412°
- Application Temperature: 40°F and rising
- Service Temperature: 15°F to 180°F

**Note:** Coating Modified Bitumen Membranes with Aluminum Coatings:
Karnak recommends coating torch-applied modified bitumen membranes as soon as possible after the membrane is installed.

Karnak’s experience, laboratory and field tests, as well as NRCA, RCMA and ARMA reports, indicate that aluminum coating will reduce the combined effects of ultraviolet rays, heat and moisture, which, especially on APP modified bitumens, enhance exudation that can cause discoloring and delamination of any surface coating.

**CAUTION:**

**CARE OF TOOLS:**
Tools may be cleaned with xylol or mineral spirits.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.
298 Alumin-R

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

When installed properly, this product will help reduce energy costs. Actual savings will vary based on geographical location and individual building characteristics. Consult your product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937) for more information.

Please see page 222 for additional mold and safety information.
Preparation and Application Guidelines:
1. All fasteners should be re-tightened or replace as necessary. Stripped fasteners must be replaced with larger fasteners. All fasteners must include a neoprene washer.
2. The roof should be power washed with TSP substitute and water maintaining a minimum of 3000 - 3500 psi of working pressure. This should remove dirt, dust, and waste products, i.e. grease, animal fats, solvents, loose roofing products and any air borne pollutants.
3. Rusted through panels or sections must be replaced.
4. Heavily rusted areas must be wired brushed down to clean, stable metal.
5. All horizontal seams must be treated in one of the following ways:

Option 1: Using Karnak 4” 550 Patch-N-Go Fleece Tape:
   a. Peel back the release sheet and apply 550 Patch-N-Go Fleece Tape exactly to the horizontal seam. Try not to remove as this may damage the seam sealing tape. Do not stretch tape.
   b. Press down firmly starting at the center and working towards the outside edge, removing bubbles. Slight wrinkling should not affect the performance of the seal. Edges must be free of fishmouths, uplifts and tunnels.
   c. Press firmly where tape goes over any fasteners.
   d. Finish seam by applying Karna-Flex over the taped seam. Apply Karna-Flex with a 3” or 4” brush. Apply at an average thickness of 1/16” to completely cover the polyester face of the tape and feather out. Coverage of Karna-Flex is approximately 50 lineal feet per gallon.

Option 2: Using Karnak 4” Resat-Mat:
   a. Apply a base coat of Karna-Flex over the seam in a 1/16” thickness by 6” width with a 3” or 4” brush.
   b. While still wet, embed 4” wide Resat-Mat in the Karna-Flex. Brush Resat-Mat to smooth out and remove any wrinkles or fishmouths.
   c. Apply a final coat of Karna-Flex over the embedded Resat-Mat. Apply at an average thickness of 1/16” to completely cover the polyester mat and feather out. No mat should be visible. Total coverage of Karna-Flex in this application is approximately 25 lineal feet per gallon.

6. If all vertical seams are rolled over and crimped, nothing needs to be done. If seams are only overlapped but tight, they should only receive a 1” wide application of Karna-Flex. If seams are open, follow treatment for horizontal seams as describe above. A good rule of thumb is if you can slip a credit card
in the seam then it needs seam tape. Coverage of Karna-Flex will be approximately 85 lineal feet per gallon.

7. Any fasteners in the field of the roof not already protected as part of a seam detail must receive a dollop (swirl coat) of Karna-Flex to completely enclose the fastener. Coverage of Karna-Flex is approximately 250 fasteners per gallon.

8. All protrusions should be flashed with 550 Patch-N-Go FleeceTape or Resat-Mat and Karna-Flex, following good roofing practices and roofing industry standards. 550 Patch-N-Go FleeceTape or Resat-Mat and Karna-Flex may be overlapped by 1” for addressing wider repairs.

9. Allow all repairs and seam details with Karna-Flex to cure for 24-48 hours.

10. Apply Karnak 502 Self-Priming Base at a rate of 1.25 - 1.5 gallons per 100 square feet. Allow base coat to dry a minimum of 24 hours before applying the finish coating.

11. Finally, apply 502 RC-W Finish Coat White at a rate of 1.25 - 1.5 gallons per 100 square feet and allow to dry.

Note: Field measurements are essential because actual square footage of corrugated roofs are more than conventional flat roofs. There could be as much as much as 20% difference in the total square footage.

**MATERIAL LIST:**

<table>
<thead>
<tr>
<th>Product</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karna-Flex</td>
<td></td>
</tr>
<tr>
<td>Fasteners:</td>
<td>250 fasteners per gallon</td>
</tr>
<tr>
<td>Vertical Seams:</td>
<td>75 lineal feet per gallon</td>
</tr>
<tr>
<td>Horizontal Seams:</td>
<td>50 lin.ft. per gallon</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Resat-Mat</td>
<td></td>
</tr>
<tr>
<td>550 Patch-N-Go FleeceTape:</td>
<td>4” x 65.5’ per roll</td>
</tr>
<tr>
<td>Resat-Mat:</td>
<td>4” x 300’ per roll</td>
</tr>
<tr>
<td>502 Self-Priming Base:</td>
<td>1.25 - 1.5 gallons per 100 sq.ft.</td>
</tr>
<tr>
<td>502 RC-W Finish White:</td>
<td>1.25 - 1.5 gallons per 100 sq.ft.</td>
</tr>
</tbody>
</table>

**502 RC-W Elasto-Kote** (Metal Roof Restoration System)

**Read Material Safety Data Sheets before using this product.**

KARNAK

330 CENTRAL AVENUE, CLARK, NJ 07066
732-388-0300 • 800-526-4236 • FAX: 732-388-9422
WEB: http://www.karnakcorp.com

FM1015 129
502 RC-W Elasto-Kote (Metal Roof Restoration System)

Note: Do not apply over asphaltic or aluminum coated surfaces

The above specification is offered as a service to the specifier. Karnak Corporation does not practice architecture nor engineering and recommends that you consult a registered architect, engineer and/or roofing consultant.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak Karna-Flex is an elastomeric, thermoplastic-rubber sealant formulated for use on properly prepared metal, concrete, spray polyurethane foam and plywood roof substrates. Its ease of application, superior adhesion, elasticity and durability make Karna-Flex an ideal repair sealant. Available in a brush mastic or caulking cartridge.

**USES:**
Karna-Flex’s elastomeric properties make it an excellent sealant for prepared metal, concrete, spray polyurethane foam and plywood roof system details. Ideal for sealing and waterproofing metal roof seams and splits, gutters, fasteners, pinholes in metal, flashing and curb details. Also use to seal around skylights, penetrations and roof top equipment.

**FEATURES, BENEFITS AND ADVANTAGES:**
1. One component—no need to intermix with other materials.
2. Easy application by brush or caulking gun.
3. Superior film—forms a durable, weather resistant elastomeric membrane.
4. Has superior adhesive and cohesive strength.
5. Low temperature flexibility—specially selected polymers and resins impart superior low temperature properties to the coating.

**SURFACE PREPARATION:**
All surfaces to be sealed must be clean, dry and free from oil, grease and other foreign matter.

**APPLICATION:**
Apply Karna-Flex by brush or caulking gun in the following manner

1. Horizontal Seams and Cracks 1/16” wide or larger.
   • Using Karnak 550 Patch-N-Go Fleece Self Sealing Tape, adhere tape to crack as directed per production application guidelines. Apply Karna-Flex at an average thickness of 1/16” to completely cover the polyester face of the tape and feather out.
2. Or, using Karnak Resat-Mat, apply Karna-Flex at an average thickness of 1/16” to completely cover the crack. Immediately embed one layer of Resat-Mat and cover with another application of Karna-Flex. Make sure to smooth the fabric out completely and cover.

Product will cure within approximately 24 hours. If continuing with 502 Elasto-Kote System is desired, allow all repairs to cure before proceeding.

**PHYSICAL PROPERTIES:**
- Weight per Gallon: 9.5 lbs
- Color: White, Black, (Gray available upon request, full skid only)
- Tensile Strength: 40 psi
- Elongation: 500%
- Low Temp Flex: -40°F
- ASTM-C-734: No cracking/pass
- Recovery: 75% min.
- VOC: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

**NOTE:**
Karna-Flex is not recommended for use over asphaltic substrates. Contact Karnak Corporation for alternative systems.
502 Karna-Flex

CAUTION:
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. KEEP OUT OF REACH OF CHILDREN. Keep container covered when not in use. Do not thin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

PACKAGING:
Karna-Flex: 3 Gallon Buckets
30 oz. Caulking Cartridges

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak #502 RC-W Elasto-Kote is a highly elastic solvent based single component exterior waterproof coating. The coating has excellent color stability, weatherability and flexibility. Karnak #502 RC-W Elasto Kote has outstanding surface appearance and durability against salt spray, acid rain and ultra-violet sunlight.

USES:
Karnak #502 RC-W Elasto-Kote is intended for use on concrete block, brick, cinder block, concrete, stucco, steel, wood, galvanized metal and previously coated surfaces. Do not apply over asphaltic surfaces.

SURFACE PREPARATION:
Allow fresh masonry to cure for 30 days before application of Karnak #502 RC-W Elasto-Kote. Surface to be coated should be clean, free from dirt, dust, grease, oil and loose paint. Patch and repair all cracks or holes with Karna-Flex and Resat-Mat or appropriate sealants or caulking materials.

APPLICATION:
Karnak #502 RC-W Elasto-Kote Base and Finish may be applied by brush, roller or spray equipment.

COVERAGE RATE:
Apply Karnak #502 RC-W Elasto-Kote Base at the rate of 1.25-1.5 gallons per 100 sq. ft. Allow base to dry 24 hours before applying #502 RC-W Elasto-Kote Finish at the rate of 1.25-1.5 gallons per 100 sq. ft. Coverage rate will vary due to texture and porosity of the surface. Film thickness should be approximately 20-24 mils dry. Karnak #502 RC-W Elasto-Kote Finish will take approximately 24 hours to cure.

ARCHITECTURAL COLORS:
Standard colors are: White and Gray. Tan Terra Cotta Red, and Patina Green available in quantities of 210 gallons minimum.

PHYSICAL PROPERTIES:
Weight Per Gallon: 9.3 lbs.
Permeability: 0.01 Perm
Solids by Weight: 50%
Solids by Volume: 40%
Hardness Shore A: 65
502 RC-W Elasto Kote (base & finish)

Elongation: 650%
Tensile Strength: 1650 psi
Vapor Transmission: 0.25
Water Absorption (7 days): 0.4%
Dry Time (To Touch): 4 to 6 hours @ 77°F 50% Relative Humidity
Cure Time: 12 to 24 hours @ 77°F 50% Relative Humidity

CAUTION:

CARE OF TOOLS:
Tools may be cleaned with xylol, mineral spirits, lacquer solvents or Karna-Klean. Take necessary safety precautions when handling flammable materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

NOTE: COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

When installed properly, this product will help reduce energy costs. Actual savings will vary based on geographical location and individual building characteristics. Consult your product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937) for more information.

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

PREPARATION AND APPLICATION GUIDELINES

1. All fasteners should be re-tightened or replace as necessary. Stripped fasteners must be replaced with larger fasteners. All fasteners must include a neoprene washer.

2. The roof should be power washed with TSP substitute and water maintaining a minimum of 3000 - 3500 psi of working pressure. This should remove dirt, dust, and waste products, i.e. grease, animal fats, solvents, loose roofing products and any air borne pollutants.

3. Rusted through panels or sections must be replaced.

4. Heavily rusted areas must be wired brushed down to clean, stable metal.

5. All Horizontal seams must be treated in one of the following ways:

   Option 1: Using Karnak 4” Resat-Mat & Karna-Flex WB:
   a. Apply a base coat of Karna-Flex WB over the seam in a 1/16” thickness by 6” width with a 3” or 4” brush.
   b. While still wet, embed 4” wide Resat-Mat in the Karna-Flex WB. Brush Resat-Mat to smooth out and remove any wrinkles or fishmouths.
   c. Apply a final coat of Karna-Flex WB over the embedded Resat-Mat. Apply at an average thickness of 1/16” to completely cover the polyester mat and feather out. No mat should be visible. Total coverage of Karna-Flex WB in this application is approximately 25 lineal feet per gallon.

   Option 2: Using 4” 550 Patch-N-Go Fleece Tape:
   a. Peel back the release sheet and apply 550 Patch-N-Go Fleece Tape exactly to the horizontal seam. Try not to remove as this may damage the seam sealing tape. Do not stretch tape.
   b. Press down firmly starting at the center and working towards the outside edge, removing bubbles. Slight wrinkling should not affect the performance of the seal. Edges must be free of fishmouths, uplifts and tunnels.
   c. Press firmly where tape goes over any fasteners.
   d. Finish seam by applying Karna-Flex WB over the taped seam. Apply Karna-Flex WB with a 3” or 4” brush. Apply at an average thickness of 1/16” to completely cover the polyester face of the tape and feather out. Coverage of Karna-Flex WB is approximately 50 lineal feet per gallon.

6. Any fasteners in the field of the roof not already protected as part of a seam detail must receive a dollop (swirl coat) of Karna-Flex WB to completely enclose the fastener. Coverage of Karna-Flex WB is approximately 250 fasteners per gallon.
7. Any newly installed metal panels must be flashed in with Karna-Flex WB and Resat-Mat or 550 Patch-N-Go Fleece Tape. Follow the guidelines for sealing horizontal seams. Secure new metal with fasteners first before sealing with Karna-Flex WB and Resat-Mat / 550 Patch-N-Go Fleece Tape.

8. All protrusions should be flashed with Karna-Flex WB and Resat-Mat or 550 Patch-N-Go Fleece Tape, following good roofing practices and roofing industry standards. Resat-Mat or 550 Patch-N-Go Fleece Tape may be overlapped by 1” for addressing wider repairs, if needed.

9. Allow all repairs and seam details with Karna-Flex WB to cure for 24-48 hours.

10. Apply Karnak 404 Corrosion Proof Base Coat at a rate of 1.5 gallons per 100 square feet. Allow base coat to dry a minimum of 24 hours before applying the finish coating.

11. Finally, apply Karnak 535 QS Enviro-Lastic White at a rate of 1.5 gallons per 100 square feet and allow to dry.

Field measurements are essential because actual square footage of corrugated roofs are more than conventional flat roofs. There could be as much as a 20% difference in the total square footage.

**MATERIAL LIST:**

<table>
<thead>
<tr>
<th>Product</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karna-Flex WB</td>
<td>Coverage</td>
</tr>
<tr>
<td>Fasteners:</td>
<td>250 fasteners per gallon</td>
</tr>
<tr>
<td>Horizontal Seams:</td>
<td>25 lineal feet per gallon with Resat-Mat</td>
</tr>
<tr>
<td></td>
<td>50 lineal feet per gallon with Fleece Tape</td>
</tr>
<tr>
<td>Resat-Mat:</td>
<td>4” x 300’ per roll</td>
</tr>
<tr>
<td>550 Patch-N-Go Fleece Tape:</td>
<td>4” x 65.5’ per roll</td>
</tr>
<tr>
<td>404 Corrosion Proof Base Coat:</td>
<td>1.5 gallons per 100 sq.ft.</td>
</tr>
<tr>
<td>535 QS Enviro-Lastic White:</td>
<td>1.5 gallons per 100 sq.ft.</td>
</tr>
</tbody>
</table>

The above specification is offered as a service to the specifier. Karnak Corporation does not practice architecture nor engineering and recommends that you consult a registered architect, engineer and/or roofing consultant.

Please see page 222 for additional mold and safety information.
505 Karna-Flex WB

DESCRIPTION:
Karna-Flex WB is an acrylic elastomeric, water-borne mastic formulated for use on built-up asphalt roofing, modified bitumen membranes and properly prepared metal, concrete, spray polyurethane foam and plywood roof substrates. Its ease of application, superior adhesion, elasticity and durability make Karna-Flex WB an ideal repair sealant.

FEATURES, BENEFITS AND ADVANTAGES:
1. White elastomeric sealant.
2. Easy application by brush or bulk loading caulking gun.
3. Excellent adhesion to many surfaces.
4. Sets up quick for coating over.
5. Low temperature flexibility—specially selected polymers and resins impart superior low temperature properties to the coating.
6. Low VOC, water-based, no odor.
7. Resistant to mold and mildew growth.
8. UV stable, may be left exposed.

USES:
Karna-Flex WB’s elastomeric properties make it an excellent sealant for making repairs to built-up asphalt roofs, modified bitumen membrane roofs, prepared metal, concrete, spray polyurethane foam and plywood roof system details. Ideal for sealing flashings, curbs and waterproofing metal roof seams, gutters, fasteners, pinholes in metal and skylights. Excellent for sealing flashings on asphalt BUR roofs and modified bitumen membrane roofs. Ideal for sealing around penetrations and roof top equipment. Use in place of flashing cement for repairs to all types of asphalt roofs prior to applying white coatings.

SURFACE PREPARATION:
All surfaces to be sealed must be dry, clean and free from rust, loose coating and caulk, oil, grease and other foreign matter. Remove silicone or other sealants before using.

APPLICATION: General Repairs
Karna-Flex WB should be applied by stiff brush or bulk loading caulking gun, depending on the application. Apply sealer when temperatures are above 50°F and rain is not forecasted within 24 hours.

For sealing flashings and lap seams use fabric reinforcement between layers of Karna-Flex WB. Apply sealer in a 1/16” to 1/8” width then immediately embed...
Karnak 5540 Resat-Mat polyester fabric into the wet coating. Smooth out fabric then apply another layer of sealer. Some shrinkage may occur and require an additional application of Karna-Flex WB.

For metal roofing follow these application guidelines:

1. Horizontal Seams and Cracks 1/16” wide or larger
   • Using Karnak 550 Patch-N-Go Fleece Tape, adhere tape to crack as directed per product application guidelines. Apply Karna Flex WB at an average thickness of 1/16” to completely cover the polyester face of the tape and feather out.
   • Using Karnak Resat-Mat, apply a 1/16” thick application of Karna-Flex WB then immediately embed one ply or Resat-Mat polyester fabric into the wet coating. Smooth out fabric then apply another layer of Karna-Flex WB.

2. Screws/Fasteners, Vertical Seams and Cracks less than 1/16”
   • Over screws and fasteners apply a dollop of Karna-Flex WB to completely enclose the screw/fastener with either a 2” wide brush or bulk loading caulk gun.
   • Over vertical seams and cracks less than 1/16” wide, back brush a minimum 2” wide application of Karna-Flex WB at an appropriate thickness of 1/16” to 1/8”.

Allow to cure 24 hours before applying any coatings over.
Not intended for use in areas that pond water.

**PHYSICAL PROPERTIES:**

- **Weight per Gallon:** 11.8 lbs
- **%NV by Weight:** 70%
- **%NV by Volume:** 65%
- **Color:** White
- **VOC:** Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

- **Tensile Strength:** 40 psi.
- **Elongation:** 500%
- **Low Temp Flex:** ASTM-C-734: Pass / No Cracking
- **Recovery:** 75% min.
CAUTION:
Do not apply when rain is imminent. Protect from freezing. Sealant must be dried before exposure to water. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. KEEP OUT OF REACH OF CHILDREN. Keep container covered when not in use. Do not thin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying. Not for use on areas that pond water, roofs should have positive drainage.

PACKAGING:
2 gallon buckets

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
404 Corrosion Proof (Metal Surface Base Coat)

DESCRIPTION:
Karnak 404 Corrosion Proof base coat is a self-priming, modified acrylic, coating that can encapsulate existing rust on properly prepared metal and inhibits the development of new rust on metal surfaces.

USES:
404 Corrosion Proof is recommended for use as an elastomeric coating applied to both clean and properly prepared but marginally rusty steel, and imparts excellent corrosion resistance, adhesion, and low temperature flexibility. The coating is intended for use as a base coat on new metal and lightly rusted metal roof surfaces prior to the application of 535QS Enviro-Lastic, 501 Elasto-Brite, or 529 Renu-White topcoats. New metal surfaces must be allowed to age 30 days before coating.

SURFACE PREPARATION:
Surfaces to be coated should be dry, clean, and free of dirt, dust, grease, oil and loose rust or coating. Power wash surfaces with 799 Wash-N-Prep Roof Cleaner and water. Wash roof surfaces with a minimum of 2000 psi. taking all necessary precautions to avoid damage to the roof system. Seal fasteners, seams and flashings with 550 Patch-N-Go Fleece self-sealing tape or Resat-Mat and Karna-Flex WB or appropriate sealants or caulking materials.

APPLICATION:
Mix lightly prior to application of the coating. 404 Corrosion Proof may be applied by brush, spray equipment or roller. For applications in higher temperatures (above 90 °F) Karnak recommends application in multiple thin coats to prevent trapped moisture problems. Commencement of work by the contractor implies his approval of the deck surface.

SPRAY APPLICATION:
Utilize a standard paint spray pump or airless spray pump. Equipment manufacturer should be consulted for more complete information. Spray application should be done with a 50% over-spray pattern.

COVERAGE RATE:
Apply 404 Corrosion Proof over the surface at the rate of 1.5 gallons per 100 sq. ft. Allow to dry 12 hours then apply the selected finish coating. The total dry mil thickness of 404 Corrosion Proof and finish coating should be 20 to 24 mils. Coverage will vary depending on the surface to be coated.
404 Corrosion Proof (Metal Surface Base Coat)

**PHYSICAL PROPERTIES:**
- Weight per Gallon: 11.0 lbs.
- Solids by Weight: 60 %
- Solids by Volume: 50 %
- Color: Light Blue
- Hardness Shore A: 70
- Elongation: 500 %
- Tensile Strength: 200 PSI
- Weathering: Excellent

**CAUTION:**
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. **Do not thin.** Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**COLD-PROCESS SYSTEMS AND COATING,** EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE. PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**CARE OF TOOLS:**
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.

**If further information is needed, contact Karnak Technical Services at 1-800-526-4236.**

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

535 QS Enviro-Lastic

**BRUSH / ROLLER APPLICATION:**
Brush/roller application should be done perpendicular to the base coat for proper protection.

**COVERAGE RATE:**
Apply 535 QS Enviro-Lastic at the rate of 1.5 gallons per 100 sq. ft. (24 wet mils) over previously applied coat of 535 QS Enviro-Lastic (if applying two coats of 535 QS Enviro-Lastic allow the first coat to dry 8-24 hours before application of the second coat) or appropriate base coating.

**PHYSICAL PROPERTIES:**
- Weight Per Gallon: 12 lbs.
- Solids By Weight: 66%
- Solids by Volume: 52%
- Color: White
- Hardness Shore A: 75

**COLOR:**
White

**CAUTION:**
Do not apply when rain is imminent. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do **not thin.** Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

**COLD-PROCESS SYSTEMS AND COATING, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.**

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION, “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

**CARE OF TOOLS:**
While material is still wet, tools may be cleaned with water. Dry coating can be cleaned with Karna-Klean or xylene or similar solvent, taking the necessary precautions when handling flammable materials.
535 QS Enviro-Lastic

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

When installed properly, this product will help reduce energy costs. Actual savings will vary based on geographical location and individual building characteristics. Consult your product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937) for more information.

Please see page 222 for additional mold and safety information.
KARNAK 220 Cold Process System is the economical way of adding extra protection and new life to smooth built-up asphalt & modified bitumen membranes, which have deteriorated beyond simple correction. The Karnak 220 System when properly applied is waterproof and resistant to extreme temperature variations.

Easy to handle, Karnak 220 with Poly-Mat weighs only 1/7th as much as cumbersome roofing felts. The 220 System is fast, permanent and easy to apply. The highly desirable feature of this system is the ability to coat over with one of Karnak’s reflective coatings.

ADVANTAGES:
• Optional Energy Star® listed reflective coating reduces energy consumption by lowering air conditioning requirements.
• Tough, flexible, reinforced membrane.
• Application causes no disruption of activities inside building.
• Avoids roof replacement and adds life to the existing roof system.
• Reflective coating prevents harmful UV rays from prematurely cracking or drying out the roofing system.

PREPARATION:
All roof surfaces to be coated should be clean, dry and free of dirt, grease, oil, dust or loose particles. This may be accomplished by power washing or hosing down and brooming with water and 799 Wash-N-Prep Roof Cleaner, taking necessary precautions to not damage roof membranes. All wet insulation should be removed and replaced. Patch and repair all cracks, holes and blisters with Karnak 19 Ultra Flashing Cement and Karnak Fiberglass Membrane or Karnak Asphalt Cotton Fabric. Allow all repairs to cure until skinned over before application of coating system.

STEP I:
Apply first coat of Karnak 220 Fibered Emulsion Roof Coating at the rate of 3 gallons per 100 sq.ft. with a roof brush or heavy-duty airless spray equipment. Immediately imbed one ply of Poly-Mat into the wet coating. Allow a 2” overlap where one strip joins another and 6” on the end laps. Gently brush each strip of mat in place so the emulsion seeps through to form a monolithic surface.
Cold Process Roofing

220 Cold Process System (for smooth BUR & modified bitumen roofs)

STEP II:
Apply a second coat of 220 Fibered Emulsion over the previously embedded mat at the rate of 3 gallons per 100 sq.ft. Allow system to cure for a minimum of 7 days or until fully cured before application of the finish reflective coating. Repeat steps 1 & 2 for extra protection.

OPTIONAL (Reflective Coatings):
Continue coating system by applying one of Karnak’s reflective coatings. Available options include:
• 97 Fibered Aluminum Coating (CRRC Rated)
• 98 Fibered Aluminum Coating (Energy Star®, CRRC Rated)
• 298 Alumin-R Rubberized Aluminum Coating (Energy Star®, CRRC Rated)
• 529 Renu-White. Note: Allow emulsion to cure 30 days before coating with acrylic coating.
• 501 Elasto-Brite Acrylic Coating (Energy Star®, CRRC Rated. Note: Allow emulsion to cure 30 days before coating with acrylic coating.
• 505 Mohave Coating. Allow emulsion to cure 30 days before coating with acrylic coating.
• 535 QS Enviro-Lastic. Allow emulsion to cure 30 days before coating with acrylic coating. Karnak’s reflective finish coatings provide the roof membrane system with excellent weathering characteristics, elongation properties, reduced surface temperatures and extend the service-life of the whole roofing system.
• 670HS Karna-Sil Ultra or 670LS Karna-Sil (Low-VOC) silicone coating.

APPLICATION SUGGESTIONS:
1. Keep wet rags handy.
3. Dip brushes in water if tacky when applying 220 Emulsion.
4. Do not apply when rain is imminent. Coating must be dried before exposure to water.
5. Protect from freezing. Temperature must be 45ºF and rising before application of AF Emulsion.
6. The dried material can be removed with Karna-Klean, mineral spirits, or similar solvents, taking the due precautions necessary when handling flammable or combustible materials.
The above specification is offered as a service to the specifier. Karnak Corporation does not practice architecture nor engineering and recommends that you consult a registered architect, engineer and/or roofing consultant.

Please see page 222 for additional mold and safety information.
ELASTOMERIC WATERPROOFING PRODUCTS

#88R Rubberized Waterproofing-Spray Grade: A solvent based rubber reinforced compound, spray grade, manufactured with select asphalts, stabilizers and mineral spirits. A multi-purpose, cold applied waterproofing coating for concrete and masonry surfaces above and below grade. Also functions as an air barrier.

#229 AR Elastomeric: A single component, rubber reinforced, asphaltic elastomeric waterproofing coating which is available in four consistencies: Trowel, Brush, Spray and Caulk. It is recommended for above and below grade foundations and most areas where extreme movement is anticipated. Also functions as an air barrier.

DAMP PROOFING: EMULSION BASED PRODUCTS

LL10 & LL20: Environmentally friendly, colorless silane modified siloxane emulsions manufactured for use as masonry water repellents. They are formulated for deep penetration which enables surfaces to shed water effectively.

#100 Non-Fibered Emulsion Coating: A general purpose, non-fibered emulsion coating prepared from an asphalt binder, carefully refined and emulsified in water by means of selected mineral colloids. The asphalt emulsion thus produced is of a heavy paint consistency and contains no fillers or fibers.

#220 Fibered Coating—Brush or Spray: This product is prepared with the highest quality asphalt and mineral fillers for brush or spray application of exterior walls below grade and cavity walls above grade and other exposed surfaces. This dampproof coating is prepared by the emulsification of a non-volatile asphalt in water by means of a selected mineral colloid. This product is then homogenized, thoroughly dispersing fibers within the mixture, completely eliminating lumps and clots for smooth application. Complies with all the requirements of ASTM D-1187 Type I and II, ASTM D-1227 Type II Class I, SS-R-1781 and MIL-R-3472A.

#920 Fibered Coating—Light Trowel: This non-pollutant product is composed of a non-volatile bituminous binder carefully prepared from selected asphalt crudes and dispensed in water by means of selected mineral colloids. The asphalt emulsion thus produced is fibered with mineral fibers. It has excellent adhesion on all types of walls and thoroughly protects the surface by permanently sealing it against the transmission of moisture saturated air or other disintegrating conditions. All Karnak emulsion coatings may be used as adhesives for adhering polystyrene and Styrofoam insulation to masonry walls. Karnak #920

KARNAK

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732-388-0300 • 800-526-4236 • FAX: 732-388-9422
WEB: http://www.karnakcorp.com
Read Material Safety Data Sheets before using this product.

Waterproofing and Dampproofing Products

complies with ASTM-D 1227 Type II Class I, ASTM D-1187 Type I, SS-R-1781 and MIL-R-3472A. (Non-Asbestos).

**Dampproofing: Solvent Base Products**

**#83 Brush Mastic:** is a carefully prepared composition of selected asphalts, mineral fillers and suitable solvents. It is prepared to a semi-mastic consistency for easy application, by brush or spray methods. This material dries to a tough, black, flexible and corrosive proof coating which gives excellent performance over wide ranges of temperature and service conditions. Provides an excellent dampproof barrier for masonry and other surfaces. Complies with all requirements of ASTM-D-4479 Type I and Federal Specification SS-A-694d (except non-asbestos).

**#86 Fibered Trowel Mastic:** This product is manufactured from a blend of selected asphalts mineral fillers and suitable solvents. It is made in a trowel consistency which dries to a tough, black, flexible and corrosive proof coating. The elastic nature of the dried coating provides excellent performance over wide ranges of temperature and service conditions.

These products are recommended for application as a dampproof coating for the exterior of masonry walls below grade. The inherent strength and adhesion of these products serve to retard the entrance of water and moisture vapors into or through the foundation walls. They are also used for the dampproofing of exterior masonry walls above grade and for all backup materials for masonry, such as stone, brick or concrete. Complies with all requirements of ASTM-D-4586 Type I (Asbestos Free) and Federal Specification SS-C-153 Type I (except non-asbestos)

**#112 Foundation Coating:** A blend of heavy bodied asphalt cutback and high grad solvents. This protective coating forms a smooth, tough, elastic film which gives excellent performance over a wide range of temperature and service conditions. Karnak #112 foundation Coating is used primarily to protect and dampproof masonry walls. The inherent strength and adhesion of this coating serve to help retard the entrance of moisture into or through the foundation wall. May also be used as a roof coating.
PRIMERS:

#89 Sta-Tack Primer: A waterbased polymer modified primer for self-adhering roofing and waterproofing membranes. This thin solution readily penetrates the pores and dries fast to provide a tacky, firm substrate for adhesion of self-adhering membranes.

#102 Asphalt Primer: This Non-Fibered Dampproofing Primer is a carefully prepared composition of selected asphalts and solvents. This material dries to a tough black finish which gives excellent performance over a wide range of temperature and service conditions.

#108 Asphalt Primer: A thin preparation of highly ductile, soft asphalt in a selected hydrocarbon solvent. It is especially designed for use as a general utility prime coat for concrete, gypsum, masonry, brick and metal surfaces, over which waterproofing, dampproofing, roof coatings and other asphalt products are to be applied. This thin solution readily penetrates the pores and seals dusty masonry surfaces to provide a firm base for such coatings. It is specified as a primer coat impervious to the application of the membrane system of waterproofing on all concrete structures. Complies with Federal Specification SS-A-701A, ASTM D-41 and AASHTO M-116.

#111 Quick-Drying Asphalt Primer: A general purpose, Quick-Drying penetrating asphalt primer specially formulated for the preparation of all types of surfaces prior to the application of hot or cold asphalt systems and/or coatings. Karnak #111 AF Quick-Drying Asphalt Primer is prepared from a blend of highly ductile, soft and high asphalts in a refined solvent. Cure Time: Approximately 2 to 4 hours @ 77/50% relative humidity.

#118 Black Asphaltum Coating: is a special Quick Drying, general purpose black asphalt paint. It has wide use as a general purpose black asphalt coating on all surfaces. Provides excellent dampproofing protection for aluminum window frames and other metals when placed in contact with masonry walls.
REINFORCING FABRICS:

**#31 Fiber Glass Membrane:** is a waterproofing fabric woven entirely of fiberglass yarn. It is ideal for use with cold application cements and coatings. Being of high flexibility it conforms to all contours and bends as required in waterproofing maintenance. Karnak #31 Fiber Glass Membrane is also treated with a synthetic resin in a proper balance to give compatibility with asphalt or tar as well as all accepted waterproofing and coating compounds. Complies with ASTM-D-1668 and Fed. Spec. HH-C466b. Available in cut sizes: 4, 6, 9, 12, 18 and 36”.

**#34 Utility Grade Cotton Fabric:** A strong cotton fabric, thoroughly impregnated with highly specialized bitumens. This exclusive Karnak process permits the fabric to unroll easily, without distortion. It can be applied smoothly and without wrinkles. The open mesh construction of the fabric allows the surface coatings to penetrate through and interlock, thereby providing a firm mechanical bond between coatings, and insuring long life of the application. This strong elastic interlocking system is very pliable and prevents rupture due to expansion and contraction of the applied surfaces. Karnak #34 Utility Grade Fabric was developed to meet the need for an economical, lighter weight fabric. Weight: .9 lbs. per 100 sq. ft. Available in cut sizes: 4, 6, 9, 12, 18 and 36.

**3036 Poly-Mat:** A firm finish stitch bonded textile material composed of polyester fiber to form a strong reinforcing fabric with cold roofing mastics and liquid elastomers. While the chemical and thermal properties of Karnak 3036 Poly-Mat are essentially those of polyester fiber, the product’s stitch bonded structure endows it with an extraordinary combination of physical properties. The distinctive characteristics of Karnak 3036 Poly-Mat include high tensile strength compiled with high elongation, outstanding tear strength and toughness, high bulk and porosity, non-raveling edges, and excellent dimensional stability.
This product is ideal for replacing felts and fiberglass as reinforcing mats on smooth surfaces such as BUR, modified bitumen membranes and concrete surfaces. Available in cut sizes: 4”, 6”, 9”, 12”, 18” and 40” x 180’ rolls.

**5540 Resat-Mat:** A stitch bonded textile material composed of polyester fiber to form a strong reinforcing fabric with cold roofing mastics and liquid elastomerics. Composed of 100% polyester, Karnak 5540 Resat-Mat has excellent conformability, making it ideal for replacing felts and fiberglass as reinforcing mats on rough or irregular surfaces such as embedded gravel and corrugated metal roof decks. The distinctive characteristics of Karnak 5540 Resat-Mat include high tensile strength compiled with high elongation, outstanding tear strength and toughness, high bulk and porosity, non-raveling edges and excellent dimensional stability. Available in cut sizes: 4” and 6” x 300’ rolls and 40” x 324’ rolls.

*Complete product data information is available on all products upon request. The above suggested recommendation for use of Karnak products are predicated on tests believe to be reliable. However, since such application and use is beyond our control, we do not guarantee the results to be obtained.

**If further information is needed, contact Karnak Technical Services at 1-800-526-4236.**
DESCRIPTION:
Karnak #LL10 & LL20 are environmentally friendly colorless silane modified siloxane emulsions manufactured for use as masonry water repellents. They are formulated for deep penetration which enables surfaces to shed water effectively.

The active material penetrates into the substrate and condenses to give hydrophobic characteristics to the substrate. The reaction does not substantially affect the water vapor permeability of the treated surfaces.

USES:
Karnak #LL10 & LL20 are water repellents designed specifically for use on fresh concrete and similar alkaline substrates. Neutral substrates will require longer curing times to develop similar water repellent characteristics.

SURFACE PREPARATION:
Application of the Karnak #LL10 & LL20 solution should be made onto a clean, dry surface free of oil, grease, dirt, laitance and adhesion-inhibiting materials.

APPLICATION:
Karnak #LL10 & LL20 (stir before using) can easily be applied by brushing or spraying until the surface is saturated. Full curing requires 7 - 10 days.

Apply the solution by starting at the top of the structure and working downward. Avoid rundown or drips.

Application should be made at temperatures of 40°F and rising.

Examples of application fields:
• Facades
• Pre-cast concrete
• Roadways
• Bridges
• Clay tile
• Field stone
• Stucco, brick, terra-cotta

COVERAGE RATE:
Apply at a rate of 125-175 square feet per gallon.

SPECIFICATION:
Fed Spec SS-W-110C; NCHRP 244 Series II
Dampproofing

Read Material Safety Data Sheets before using this product.

LL10 & LL20 Water Repellents

PHYSICAL PROPERTIES:

<table>
<thead>
<tr>
<th></th>
<th>LL10</th>
<th>LL20</th>
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<tbody>
<tr>
<td>ACTIVE MATTER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density, #/ga</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>VOC (ethanol by reaction)</td>
<td>Please visit <a href="http://www.karnakcorp.com">www.karnakcorp.com</a> for latest VOC content as products are updated to comply with the most current VOC regulations</td>
<td></td>
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PERFORMANCE:

• Prevents concrete corrosion by blocking salt penetration
• Water repellency
• Effective protection, even in wind-driven rain
• Good penetration
• Reduction of salt blooming
• Non-tacky finish
• Normally, no visible change of surface
• Prevents spalling

TEST RESULTS:

Water Repellant Chart (Absorption vs. Control)
Uncoated 24 hr. Absorption%, Coated 72 hr. Absorption %, Absorption Reduction %;
LL10 (10%) 8.4, 0.97, 88.0; LL20 (20%) 8.3, 0.63, 92.0

NCHRP 244 Series II Results
Chloride Ion (Salt) Intrusion LL10 84%, LL20 90%
CAUTION:
Do not apply when rain is imminent. Protect from freezing. Coating must be
dried before exposure to water. Store in a heated room and keep container covered
when not in use. Do not thin. Cover air intakes during application and while drying.

Keep out of reach of children. Avoid prolonged contact with skin. Wear protective
eye wear. Dispose of in an environmentally safe manner. For additional information
refer to the MSDS sheet.

Do not store material at extreme temperature, below 32°F (0°C) or above 125°F
(50°C) for any length of time.

Karnak #LL10 and #LL20 has a shelf life of 12 months from date of delivery when
stored in unopened containers at room temperatures.

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with soap and water
immediately after use. Mineral spirits may be needed for clean-up if tools are
allowed to dry, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at
1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak #83 Fibered Dampproofing is a solvent based asphalt compound, manufactured with selected asphalts, mineral fibers, stabilizers and mineral spirits. Karnak #83 Fibered Dampproofing is prepared to semi-mastic consistency for easy application, by brush, spray or roller. This material is a multi purpose, cold applied protective dampproofing that dries to a tough, durable and flexible coating that gives excellent performance over a wide range of temperature and conditions. This product exhibits excellent resistance to acids and alkalies in the soils and in the environment.

**USES:**
Karnak #83 Fibered Dampproofing is designed to dampproof masonry and concrete exterior surfaces below grade and interior surfaces above grade. This product is also suitable as a general protective coating for wood, steel and for all backup materials for masonry such as stone, brick and concrete.

**SURFACE PREPARATION:**
Surfaces must be clean, dry and free from oil, grease, release agents, laitance, dirt, dust and debris. All cracks and pin holes should be repaired and filled with Karnak #86 Trowel Mastic prior to coating. If the surface is very porous, it is recommended that Karnak #108 Asphalt Primer be utilized to provide a firm film base prior to coating with Karnak #83 Fibered Dampproofing.

**BRUSH APPLICATION:**
Apply with a wide, fiber brush at the rate of 4 gallons per 100 sq. ft.

**SPRAY APPLICATION:**
Utilize a standard heavy duty airless spray pump using heavy duty guns and nozzles. Equipment manufacturers should be consulted for more complete information. Apply at the rate of 4 gallons per 100 sq. ft.

**COVERAGE RATE:**
Apply at the rate of 4 gallons per 100 square feet.

**SPECIFICATIONS:**
ASTM D-4479 Type I
SSA-694d

**PHYSICAL PROPERTIES:**
- Weight per Gallon: 8.4 lbs.
- Solids by Weight: 72%
83 Fibered Dampproofing (brush or spray)

Solids by Volume: 65%
Color: Black
Permeability: .25 perms
Cure Time: 24 to 48 hours @ 77°F
@ 50% Relative Humidity
Application: Brush or Spray
Service Temperature Range: 15°F to 150°F

CHEMICAL RESISTANCE:
Acids Excellent
Alkaline Excellent
Salts Excellent

NOTE: Allow the film to cure for at least 24 to 48 hours prior to backfilling. Care should be taken during filling not to puncture or damage the coating. A protection board is highly recommended to protect the film prior to backfilling. Backfilling should take place within 7 days in areas where hydrostatic pressure is known to occur. Contact Karnak Corporation for alternate product suggestions.

CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
86 Fibered Trowel Mastic

DESCRIPTION:
Karnak #86 Fibered Trowel Mastic is manufactured from a blend of selected asphalts, fibers, stabilizers, fillers and solvents. Karnak #86 Fibered Trowel Mastic is a heavy bodied product which dries to a tough, flexible and elastic protective coating. Karnak #86 Fibered Trowel Mastic is highly resistant to the penetration of water and moisture over a wide range of temperature and service conditions. Karnak #86 Fibered Trowel Mastic has excellent resistance to most acid, alkali, and salt spray solutions.

USES:
Karnak #86 Fibered Trowel Mastic is especially recommended for application as a protective coating for exterior masonry walls below grade and exterior face of interior walls (cavity wall construction), and as a dampproofing product for retaining walls, bridge abutments and steel panels. It is also used for the coating of interior faces of exterior masonry walls above grade, and for all back-up material for masonry, such as stone, brick or concrete. Karnak #86 Fibered Trowel Mastic can be used for waterproofing when used in conjunction with a multi-membrane application.

SURFACE PREPARATION:
Surfaces must be clean, dry and free from oil, grease, release agents, laitance, dirt, dust and debris. All cracks and holes should be filled with Karnak #86 Fibered Trowel Mastic prior to surface coating. If the surface is porous, it is recommended that Karnak #108 Asphalt Primer be utilized to provide a firm film base prior to application of Karnak #86 Fibered Trowel Mastic.

APPLICATION:
Karnak #86 Fibered Trowel Mastic is easily applied with a regular trowel. Using even strokes, a smooth uniform film can be obtained and provide adequate protection. Coating should be continuous and free of pinholes or holidays. Allow the film to cure for at least 24 to 48 hours prior to backfilling. Cure time can be affected by the film thickness and the temperature. Care should be taken during backfilling, so as not to puncture or damage the coating. A protection board is highly recommended to protect the film when backfilling. Backfilling should take place within 7 days.

COVERAGE RATE:
A recommended coverage rate of 5 to 6 gallons per 100 square feet is desired for adequate protection. Application rates can vary depending upon the surface to be covered.
86 Fibered Trowel Mastic

SPECIFICATIONS:
ASTM D-4586 Type I, (Non-Asbestos)
Fed. Spec. SS-C-153 Type I (except Asbestos-Free)

PHYSICAL PROPERTIES:
Weight per Gallon: 8.3 lbs.
Solids by Weight: 74%
Solids by Volume: 67%
Color: Black
Dry Time: 24 to 48 hours
Service Temperature Range: 15°F to 160°F
Perm Rating: 0.25 perms

CAUTION:
Do not use near open flame. Avoid breathing solvent and fumes and avoid prolonged contact with skin. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. Do not thin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION
Karnak #100 Non-Fibered Emulsion Dampproofing is a general purpose coating, manufactured with refined asphalt, emulsifiers and selected clay fillers. The dried film cures to a tough, flexible, durable finish and will resist extreme variations in temperature and weather. Karnak #100 Non-Fibered Emulsion Dampproofing will not burn or support combustion in a liquid state. This is a low odor coating that resists the absorption of exterior moisture. Karnak #100 Non-Fibered Emulsion Dampproofing can be applied to damp surfaces.

USES:
Karnak #100 Non-Fibered Emulsion Dampproofing is a vapor retarder used as a protective coating against dampness on the exterior face of interior walls in cavity wall construction and exterior surfaces of concrete, metal and wood above or below grade. It may also be applied to interior surfaces in the absence of hydrostatic pressure. The emulsion may be utilized as an adhesive for polystyrene insulation prior to backfilling.

SURFACE PREPARATIONS:
Surface should be free of oil, grease, dirt laittance and adhesion-inhibiting materials. Dry surfaces may be dampened with water before application of the coating. Repair all cracks and holes with Karnak #920 Fibered Emulsion Mastic and Karnak #31 Fiber-Glass Membrane or Karnak #34 Asphalt Saturated Cotton Fabric before applying the surface coating.

BRUSH APPLICATION:
Apply with a wide fiber brush. Apply at the rate of 2 to 3 gallons per 100 sq. ft.

SPRAY APPLICATION:
Utilize a standard heavy duty spray pump using heavy duty guns and nozzles. Apply at the rate of 2 to 3 gallons per 100 sq. ft. Equipment manufacturer should be consulted for more complete information.

APPLICATION:
Karnak #100 Non-Fibered Emulsion Dampproofing is easily applied by brush, roller or spray equipment. Apply Karnak #100 Non-Fibered Emulsion Dampproofing in one coat. If applying two coats, allow the first coat to dry. Coating should be continuous and free of pinholes or holidays. Cover all slots, joints and grooves and apply into all chases and corners.

KARNAK
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732-388-0300 • 800-526-4236 • FAX: 732-388-9422
WEB: http://www.karnakcorp.com

FM1015
APPLICATION:

A. Above-grade dampproofing (interior and exterior cavity walls):

Apply one coat of Karnak #100 Non-Fibered Emulsion Dampproofing at a rate of 2 to 3 gallons per 100 sq. ft. If applying two coats, each coat should be 2 to 3 gallons per 100 sq. ft. (First coat must be allowed to dry prior to the application of the second coat).

B. Below-grade dampproofing (interior, exterior and cavity walls):

Apply one coat of Karnak #100 Non-Fibered Emulsion Dampproofing at a rate of 2 to 3 gallons per 100 sq. ft. If applying two coats, each coat should be 2 to 3 gallons per 100 sq. ft. (First coat must be allowed to dry prior to the application of the second coat.)

C. Fabric re-enforced dampproofing:

Apply one coat of Karnak #100 Non-Fibered Emulsion Dampproofing at a rate of 2 to 3 gallons per 100 sq. ft. Apply Karnak #31 Fiber Glass Membrane or Karnak #34 Asphalt Saturated Cotton Fabric over the wet coating, overlapping all edges. Smooth out all wrinkles, making sure there is no trapped air underneath the fabric. Proceed with second coat at a rate of 2 to 3 gallons per 100 sq. ft.

D. Polystyrene insulation adhesive:

Karnak #100 Non-Fibered Emulsion Dampproofing is a water-based asphalt emulsion that is 100% compatible with polystyrene insulation or protection board. As an adhesive, Karnak #100 Non-Fibered Emulsion Dampproofing should be applied in 4” diameter dabs directly to the insulation and immediately pressed into place.

Note: When more than two courses are required, wall ties may be necessary. Allow the film to cure for a minimum of 24 to 48 hours prior to backfilling.

Care should be taken during backfilling not to puncture or damage the coating. A protection board is highly recommended and backfilling should take place within 7 days.

COVERAGE RATE:

Apply at 2 to 3 gallons per 100 square feet. Spray application should be at the same rate.
100 Non-Fibered Emulsion Dampproofing

SPECIFICATION:
ASTM D-1187 Type II
ASTM D-1227 Type III
SS-R-1781
MIL-R-3472A

PHYSICAL PROPERTIES:
Weight per Gallon: 8.5 lbs
Solids by Weight: 52% Nominal
Solids by Volume: 49% Nominal
Color: Black
Permeance: 0.5 metric perms
Cure Time: 24 to 48 hours @ 77°F and 50% Relative Humidity
Service Temp.(Cured Film): -5°F to 180°F

CAUTION:
Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

CARE OF TOOLS:
Tools and other equipment should be cleaned with water immediately after use. Dried coating may be cleaned with mineral spirits. Take necessary precautions when handling combustible material.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak #102 Asphalt Primer is a material composed of selected asphalts and refined solvents. It has good resistance to temperature change, yet dries to a tough film. Karnak #102 Asphalt Primer provides a firm base and better adhesion for the application of asphalt coatings. The Karnak #102 Asphalt Primer is not to be used as a roof coating.

USES:
Karnak #102 Asphalt Primer’s uses include prime coat over brick, metal surfaces, gypsum, concrete block and cinder block. It is also used to coat interior faces of masonry walls above grade and for all back-up materials such as stone, brick and concrete.

APPLICATION:
Karnak #102 Asphalt Primer is easily applied by brush, roller or spray equipment.

BRUSH APPLICATION:
Apply with a wide, fiber brush at a rate of .5 to 1 gallon per 100 sq. ft. Work primer into all cracks, holes and crevices.

SPRAY APPLICATION:
Utilize a standard heavy duty spray pump using heavy duty guns and nozzles. Equipment manufacturer should be consulted for more complete information. Apply at the rate of .5 to 1 gallon per 100 sq. ft.

NOTE:
Primer must be thoroughly dry prior to coating applications.

COVERAGE RATE:
Apply at the rate of .5 to 1 gallon per 100 square feet depending upon the condition and porosity of the surface to be primed.

PHYSICAL PROPERTIES
Weight per gallon: 7.80
Solids by Weight: 70%
Solids by Volume: 64%
Color: Black
Dry Time: 8 to 24 hrs.
Service Temperature Range: -40°F to 180°F
CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
General purpose, penetration asphalt primer used for the preparation of all types of surfaces previous to the application of hot or cold asphalt coatings. Karnak #108 Asphalt Primer is a controlled preparation of a highly ductile, soft asphalt in a refined solvent.

**USES:**
It is especially designed for use as a general utility prime coat for concrete, gypsum, masonry, brick and metal surfaces over which waterproofing, dampproofing, roof coatings and other asphaltic products are to be applied. This thin solution readily penetrates pores and seals dusty masonry surfaces to provide a firm base for such coatings. It is specified as a prime coat previous to the application of the membrane system of waterproofing on all concrete structures. It is also very efficiently used as a felt primer on old dried out built-up roofs where penetration is required to revitalize the base surfaces before roof coatings or cold applied systems are applied.

**SURFACE PREPARATION:**
All surfaces to be primed or coated with Karnak #108 Asphalt Primer must be dry and free from oil, grease and any other foreign matter.

**APPLICATION:**
Easily applied by brush or spray equipment at the rate of .5 to 1 gallon per 100 sq. ft. depending upon porosity and type of surface being primed. Masonry and dried out built-up roof structures should be liberally coated to obtain the most penetration so that an effective bond can be achieved for the covering material.

**COVERAGE:**
Apply at the rate of .5 to 1 gallon per 100 sq. ft.

**SPECIFICATIONS:**
ASTM D-41
AASHTO M-116
CAUTION:

CARE OF TOOLS:
Brushes and other tools may be thoroughly cleaned after use with mineral spirits, taking the necessary precaution when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak #112 Foundation & Roof Coating is a non-fibered asphalt coating for preventing moisture penetration through foundation walls and protecting a variety of roof surfaces. The finished coating forms a smooth, tough, flexible film that serves to help retard the entrance of moisture into or through the foundation wall. On the roof it helps to extend the life of a variety of roofing systems. If a hydrostatic pressure condition is present against the foundation wall, Karnak recommends using a Karnak waterproofing product such as Karnak 88R Rubberized Waterproofing (Aqua-Block) or Karnak 229AR-Elastomeric.

**FEATURES, BENEFITS AND ADVANTAGES:**
- Penetrates and seals exterior below grade walls.
- Protects asphalt roofs from the hot sun and winter weather.
- Forms a smooth, tough, elastic film.
- Protects metal and wood below grade.

**USES:**
Karnak #112AF Foundation & Roof Coating can be applied on exterior below grade and interior above grade block and masonry walls where no hydrostatic pressure is present. Use to coat all types of smooth surface asphalt roofs. Can also be used to protect wood and metal above or below grade.

**SURFACE PREPARATION:**
All surfaces should be clean, dry and free from oil, grease, dust, dirt, loose paint or other foreign matter.

**APPLICATION:**
Apply with either a brush, roller or heavy-duty airless spray equipment in a smooth continuous coat over the entire area. Coating should be continuous and free of pinholes or holidays. If not, apply a second application at right angles to the original coat. Allow at least 24 hours drying time before backfilling the foundation. Care should be taken not to puncture or damage the coating. Do not apply to damp or frost-covered surfaces. When used for below grade damp proofing, a protection board is highly recommended.

**COVERAGE:**
Foundation Walls – Apply #112 at the rate of 1 to 1.5 gallons per 100 sq.ft.
Roofs – Apply at the rate of 1 to 2 gallons per 100 sq.ft. Coverage rates may vary depending on the condition and porosity of the surface.
**112 Foundation Coating**

**PHYSICAL PROPERTIES:**
- Weight per Gallon: 7.80
- Solids by Weight: 70%
- Solids by Volume: 64%
- Weight per Gallon: 7.8 lbs.
- Color: Black
- Dry Time: 8 to 24 hours
- Service Temp. Range: -40°F to 180°F

**CAUTION:**

**CARE OF TOOLS:**
Tools and other equipment should be thoroughly cleaned with Karna-Klean or mineral spirits, taking necessary precautions when handling combustible materials.

**PACKAGING:**
Available in 1 gallon cans, 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
118 Black Asphaltum

DESCRIPTION:
Karnak #118 Black Asphaltum is a special formulated QUICK-DRYING general purpose black asphalt paint. It is prepared from a selected, high melting-point asphalt, carefully admixed with a pure hydrocarbon solvent to a paint consistency. It will withstand the rigors of hot summer temperatures without sagging or running. It provides excellent protection against weather and corrosion.

USES:
Karnak #118 Black Asphaltum has wide use as a general purpose black asphalt coating on all surfaces. It provides excellent protection for aluminum window frames and other metals when placed in contact with masonry walls. It will also help prevent corrosion and decay on storage tanks, railings, pipe and exterior duct work.

SURFACE PREPARATION:
All surfaces should be clean, dry and free from oil, grease, dust, dirt, loose paint or other foreign matter.

COVERAGE:
Easily applied by brush or spray equipment at the rate of 1 to 1.5 gallons per 100 sq. ft.

SPECIFICATIONS:
Federal Spec: TT-C-494
Federal Spec: FF-H-C-494
Military Spec: Mil-C-16173D

CAUTION:

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak #220 Fibered Emulsion Dampproofing is a general purpose coating, manufactured with refined asphalt, clay emulsifiers, and selected non-asbestos fibers. The dried film cures to a tough, flexible, durable finish and will resist variations in temperature and weather. Karnak #220 Fibered Emulsion Dampproofing will not burn or support combustion in a liquid state. This is a low odor coating that resists the absorption of exterior moisture. Karnak #220 Fibered Emulsion Dampproofing may be applied to slightly damp surfaces.

**USES:**
Karnak #220 Fibered Emulsion Dampproofing is a vapor retarder used as a protective coating against dampness on the exterior face of interior walls in cavity wall construction and exterior surfaces of concrete, metal and wood above or below grade. It may also be applied to interior surfaces in the absence of hydrostatic pressure. The emulsion may be utilized as an adhesive for polystyrene insulation prior to backfilling.

**SURFACE PREPARATION:**
Surface should be free of oil, grease, dirt, laitance and loose material. Dry surfaces may be dampened with water before application. Repair all cracks and holes with Karnak #220 Fibered Emulsion Dampproofing and Karnak #31 Fiberglass Membrane or Karnak #34 Asphalt Saturated Cotton Fabric, before applying the surface coating.

**APPLICATION:**
Karnak #220 Fibered Emulsion Dampproofing is easily applied by brush, roller or spray equipment. Apply Karnak #220 Fibered Emulsion Dampproofing in one coat. If applying two coats, allow the first coat to dry. Coating should be continuous and free of pinholes and holidays. Cover all slots, joints and grooves and apply into all chases and corners.

A) Above-grade dampproofing (interior and exterior):
Apply one coat of Karnak #220 Fibered Emulsion Dampproofing at a rate of 4 to 6 gallons per 100 sq. ft. If applying two coats, each coat should be 2 to 3 gallons per 100 sq. ft. (First coat must be allowed to dry prior to the application of the second coat).

B) Below-grade dampproofing (interior, exterior and cavity walls):
Apply one coat of Karnak #220 Fibered Emulsion Dampproofing at a rate of
220 Fibered Emulsion Dampproofing (brush or spray)

4 to 6 gallons per 100 sq. ft. If applying two coats, each coat should be 2 to 3 gallons per 100 sq. ft. (First coat must be allowed to dry prior to the application of the second coat.)

C) Fabric re-enforced dampproofing:

Apply one coat of Karnak #220 Fibered Emulsion Dampproofing at a rate of 2 to 3 gallons per 100 sq. ft. Apply Karnak #31 Fiber Glass Membrane or Karnak #34 Asphalt Saturated Cotton Fabric over the wet coating, overlapping all edges. Smooth out all wrinkles, making sure there is no trapped air underneath the fabric. Proceed with second coat at a rate of 2 to 3 gallons per 100 sq. ft.

D) Polystyrene insulation adhesive:

Karnak #220 Fibered Emulsion Dampproofing is a water-based asphalt emulsion that is 100% compatible with polystyrene insulation or protection board. As an adhesive, Karnak #220 Fibered Emulsion Dampproofing should be applied in 4” diameter dabs directly to the insulation and immediately pressed into place.

Note: When more than two courses are required, wall ties may be necessary. Allow the film to cure for a minimum of 24 to 48 hours prior to backfilling.

Care should be taken during backfilling not to puncture or damage the coating. A protection board is highly recommended and backfilling should take place within 7 days.

COVERAGE RATE:
Apply at 4 to 6 gallons per 100 square feet. Spray application should be at the same rate.

SPECIFICATIONS:
ASTM D-1227 Type II Class I
ASTM D-1187 Type I and Type II
SS-R-1781 (except non-Asbestos)
MIL-R 3472A (except non-Asbestos)
**220 Fibered Emulsion Dampproofing (brush or spray)**

**PHYSICAL PROPERTIES:**
- Weight per Gallon: 9.2
- Solids by Weight: 52% Nominal
- Solids by Volume: 49% Nominal
- Color: Black
- Permeance: 0.5 perms
- Cure Time: 24 to 48 hours @ 77°F and 50% Relative Humidity
- Service Temp. (Cured Film): -5°F to 180°F.

**CAUTION:**
Do not apply when rain is imminent. **Protect from freezing.** Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. **Do not thin.**

Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

**CARE OF TOOLS:**
Tools and other equipment should be cleaned with soapy cool water immediately after use. Dried coating may be cleaned with mineral spirits. Take necessary precautions when handling combustible material.

**PACKAGING:**
Available in 5 gallon pails and 55 gallon drums.

**If further information is needed, contact Karnak Technical Services at 1-800-526-4236.**

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak #920 Fibered Emulsion Mastic is a general purpose coating, manufactured with refined asphalt, clay emulsifiers, and selected non-asbestos fibers. The dried film cures to a tough, flexible, durable finish and will resist variations in temperature and weather. Karnak #920 Fibered Emulsion Mastic will not burn or support combustion in a liquid state. This is a low odor coating that resists the absorption of exterior moisture. Karnak #920 Fibered Emulsion Mastic may be applied to slightly damp surfaces.

**USES:**
Karnak #920 Fibered Emulsion Mastic is a vapor retarder used as a protective coating, against dampness on the exterior face of interior above grade and exterior surfaces of concrete, metal and wood above or below grade. It may also be used to dampproof interior surfaces below grade in the absence of hydrostatic pressure. The emulsion may be utilized as an adhesive for styrofoam insulation prior to backfilling.

**SURFACE PREPARATION:**
Surface should be free of oil, grease, dirt, laitance and loose material. Dry surfaces may be dampened with water before application. Repair all cracks and holes with #920 Fibered Emulsion Mastic and Karnak #31 Fiberglass Membrane or Karnak #34 Asphalt Saturated Cotton Fabric, before applying the surface coating.

**APPLICATION:**
Karnak #920 Fibered Emulsion Mastic is easily applied by trowel. Apply Karnak #920 Fibered Emulsion Mastic in one coat. If applying two, allow the first coat to dry. Coating should be continuous and free of pinholes or holidays. Cover all slots, joints and grooves and apply into all chases and corners.

A. Above-grade dampproofing: (interior and exterior)

Apply one coat of Karnak #920 Fibered Emulsion Mastic at a rate of 4 to 6 gallons per 100 sq. ft. If applying two coats, each coat should be 2 to 3 gallons per 100 sq. ft. (First coat must be allowed to dry prior to the application of the second coat).

B. Below-grade dampproofing: (exterior only)

Apply one coat of Karnak #920AF Fibered Emulsion Mastic at a rate of 4 to 6 gallons per 100 sq. ft. If applying two coats, each coat should be 2 to 3 gallons per 100 sq. ft. (First coat must be allowed to dry prior to the application of the second coat).

C. Fabric reinforced dampproofing:
Apply one coat of #920AF Fibered Emulsion Mastic at a rate of 2 to 3 gallons per 100 sq. ft. Apply Karnak #31 Fiberglass Membrane or Karnak #34 Asphalt Saturated Fabric over the wet coating, overlapping all edges. Smooth out all wrinkles, making sure there is no trapped air underneath the fabric. Proceed with second coat at a rate of 2 to 3 gallons per 100 sq. ft.

D. Polystyrene insulation adhesive:

Karnak #920AF Fibered Emulsion Mastic is a water-based emulsion that is 100% compatible with Polystyrene insulation or protection board. As an adhesive, Karnak #920AF Fibered Emulsion Mastic should be applied in 4” diameter dabs at an approximate rate of 1 quart per 100 square feet, and the insulation pressed firmly into it immediately.

Note: When more than two courses are required wall ties may be necessary.

COVERAGE RATE:

Apply at 4 to 6 gallons per 100 square feet.

SPECIFICATIONS:

ASTM D-1187 Type I
ASTM D 1227 Type II Class 1
SS-R-1781
MIL-R 3472A

PHYSICAL PROPERTIES:

Weight per Gallon: 9.2
Solids by Weight - : 52%
Solids by Volume: 49%
Color: Black
Permeability: 0.5 perms
Cure Time: 24 to 48 hours @ 77°F
50% Relative Humidity
Cured Temperature Range: -5°F to 180°F
CAUTION:
Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

CARE OF TOOLS:
Equipment may be cleaned with water immediately after use. Dried coating may be cleaned with mineral spirits. Take necessary precautions when handling combustible material.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
88R Rubberized Waterproofing (spray grade)

DESCRIPTION:
Karnak #88R Rubberized Waterproofing is a solvent based elastomeric asphalt compound, manufactured with selected asphalts, stabilizers and mineral spirits. Karnak #88R Rubberized Waterproofing is prepared to semi-mastic consistency for easy spray application. Karnak #88R is a multi purpose, cold applied protective waterproofing that dries to a tough 33-mil durable and flexible coating that gives excellent performance over a wide range of temperature and weather conditions. This protective coating also functions as an air barrier as specified in a number of building codes. Karnak #88R Waterproofing exhibits excellent resistance to acids and alkalis in soil and in the environment.

USES:
Karnak #88R Rubberized Waterproofing is designed to waterproof masonry and concrete exterior surfaces below grade and interior cavity wall surfaces above grade. Karnak #88R also functions as a vapor barrier and air barrier. This product is also suitable as a general protective coating for wood, spray polyurethane foam, steel and for all backup materials for masonry such as stone, brick and concrete.

SURFACE PREPARATION:
Surfaces must be clean, dry and free from oil, grease, release agents, laitance, dirt, dust and debris. All cracks and imperfections should be repaired and filled with Karnak #229AR-Elastomeric Trowel Grade prior to coating. If a primer is necessary, Karnak recommends that Karnak #108 Asphalt Primer be utilized to provide a firm film base prior to coating with Karnak #88R Rubberized Waterproofing.

APPLICATION:
Apply by standard heavy-duty airless spray equipment. Equipment manufacturers should be consulted for more complete information. Spray tip should be 0.035 to 0.041 mm. Apply at the rate of 4 gallons per 100 sq. ft. Material may also be applied by masonry brush.

NOTE: Allow the film to cure for at least 24 to 48 hours prior to backfilling. Care should be taken during filling not to puncture or damage the coating. A protection board is highly recommended to protect the film prior to backfilling. Contact Karnak Corporation for alternate product suggestions.
88R Rubberized Waterproofing (spray grade)

COVERAGE:
Apply at the rate of 4 gallons per 100 sq. ft. (64 wet mils.)

SPECIFICATIONS:
- ASTM D-4479 Type I
- Fed. Spec. SS-A-694d ()
- Complies with Chapter 13 of Massachusetts Energy Code

PHYSICAL PROPERTIES:
Weight Per Gallon: 7.8 lbs.
Solids by Weight: 57.3%
Solids by Volume: 51.3%
Color: Black
Water Vapor Permeance: 0.026 perm ASTM E-96
Air Permeability (Leakage): 0.001 L/(s.m2) @ pressure difference of 75 Pa ASTM E-293
Cure Time: 24 to 48 hours @77ºF and 50% Relative Humidity
Application: Spray or Brush
Service Temp. Range: -40ºF to 160ºF
Elongation: 550-600% ASTM D-412
Tensile Strength: 150 PSI ASTM D-412
Coverage: 4 gallon per 100 sq. ft.

CHEMICAL RESISTANCE:
Acids: Excellent
Alkaline: Excellent
Salts: Excellent
88R Rubberized Waterproofing (spray grade)

CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with Karna-Klean or mineral spirits, taking necessary precautions when handling combustible materials.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
KARNAK One-Kote is a single-component elastomeric waterproofing membrane, polyurethane with bitumen modifiers, designed for installations on below grade foundation walls of concrete or CMU and concrete deck applications with split slabs or pavers systems. Above grade applications on concrete, CMU, or frame and sheathing, insulated wall systems.

USES:
KARNAK One-Kote is an ideal waterproofing membrane for concrete below-grade foundation walls, tunnels, earth sheltered structures and decks for split-slab or paver overburdens, CMU foundation walls and CMU or frame and sheathing exterior insulated walls (wall temperatures does not exceed 1300F (540C)). Plywood terrace or balcony deck installations with High-Build application.
Single layer application membrane thickness of 60 mil for vertical and horizontal applications.
High-Build multi-layer application of 90 or 120 mil of membrane thickness.
After fully cured verify the integrity of the cured membrane on horizontal surfaces by flood testing the area with a minimum depth of 2 ½” (63 mm) of water and allowing the water to stand for 24 hours. Visually inspect the bottom surface of the deck to check for any water penetration. If repairs are necessary, drain the area and allowed to dry, reapply again for membrane integrity. Protect immediately.

Exterior below grade: Concrete Construction, Walls / Tunnels / Planters, CMU Construction Walls, Incidental Metal Walls, Pressure Treated Foundation Walls
Above grade Insulated Cavity Walls: Concrete or CMU Walls, Framing & Exterior Sheathing Walls, EIFS Exterior Wall Assemblies
Horizontal elevated decks: Parking Garage – Split Slab, Plaza Decks – Split Slab/Pavers, Terraces
APPLICATION:

- All concrete deck surfaces should be steel trowel to a flat, uniform surface with a light broom finish.
- Concrete must be properly cured for at least 30 days, water cure is recommended. If membrane curing compounds are used these must be mechanically removed prior to application.
- Deck surfaces to receive Karnak One-Kote waterproofing membrane require a minimum of 2% slope to drain. (ASTM C 1127 Standards)
- Patch all voids and deep depressions in the substrates with appropriate patch materials before applying Karnak One-Kote.
- Apply Karnak One-Kote when substrates are dry and air temperatures are 40°F to 90°F (4°C to 32°C): for application temperatures below 40°F (4°C), consult Technical Services.
- Avoid application of inclement weather is present or imminent.
- Do not apply to surfaces that are wet or contaminated.
- CMU construction requires a prime coat of Karnak One-Kote to the porous block. Dilute the water roofing up to 25% with the xylene or apply a parge code of cementitious material, and allow curing minimum of 24 hours prior to applying Karnak One-Kote.
- Remove all dust, dirt and other contaminants just prior to application. All surfaces must be dry at the time of application.
- Pre-strip any pockmarks or honeycombs with membrane to fill cavities completely. Air entrapment within voids may cause blisters. Extreme cases may require additional repair.
- Static cracks and joints are considered to be less than 1/16” (1.6 mm) and should be filled by pre-stripping. Applied materials so it both fills and overlaps joints or crack to a width of 4” (102 mm) on each side.
- Dynamic or working joints are considered to be over 1/8” (3 mm) must be sealed with polyurethane sealant. These joints should be routed to a minimum of ¼” (6 mm) and filled with sealant.
- Uncoated metal surfaces require removal dust debris any other contaminants and brush to bright metal. Clean the surfaces with approved solvent prior to the installation of a polyurethane sealant or pre-strip of Karnak One-Kote.
- All joints, cracks, and openings around penetrations must be sealed with sealant or pre-stripping of Karnak One-Kote and allowed to cure overnight before applying final membrane.
Waterproofing

Read Material Safety Data Sheets before using this product.

192 One-Kote (Vertical/Horizontal)

- When the final membrane is applied, the overall thickness over joints and cracks, at corners and around penetrations should be approximately 100 mils (2.5 mm) on the standard system.
- Standard system application horizontal surfaces, empty contents of the pail and spread immediately to ensure workability. Best results are obtained by marking off 125 ft.² (11.61 m²) area and evenly spreading the contents of the 5 gallon (18.93L) unit with a rubber edge notched squeegee, ¾” nap roller or trowel.
- From vertical applications install at a rate of 25 ft.²/gal (0.6 m²/liter) with a trowel, ¾” nap roller or spray.
- Verify the applied thicknesses with a wet mil thickness gauge as a work progresses.
- High Build system application horizontal surfaces, apply 60 wet mils of Karnak One-Kote, followed by setting reinforcement fabric into the wet material. Overlap all seams a minimum 3 inches (76 mm). Allow the first coat to cure overnight and follow with the second 60 mil-wet application. sealant and then proceed with the High Build system.
- Curing requires a minimum 24 hours at 75° F (24° C) and 50% relative humidity. Protect membrane from traffic during curing process.
- Plywood applications require all plywood all joints to be sealed with polyurethane sealant and then proceed with the high build system.
- Curing requires a minimum 24 hours at 75° F (24° C) and 50% relative humidity. Protect membrane from traffic during curing process.
- After fully cured verify the integrity of the cured membrane on horizontal surfaces by flood testing the area with a minimum depth of 2½” (63 mm) of water and allowing the water to stand for 24 hours. Visually inspect the bottom surface of the deck to check for any water penetration. If repairs are necessary, drain the area and allowed to drive, reapply and tested again for membrane integrity. Protect immediately.
**SPECIFICATIONS:**
ASTM C 836  
Nat’l Standard of Canada 37.58 - M86

**PHYSICAL PROPERTIES:**

<table>
<thead>
<tr>
<th>Property</th>
<th>Results</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulus (100%)</td>
<td>80 psi</td>
<td>ASTM D 412</td>
</tr>
<tr>
<td>Heat Aging</td>
<td>No Cracking</td>
<td>ASTM C 836</td>
</tr>
<tr>
<td>Bridge Cracking</td>
<td>Pass (10 cycles)</td>
<td>ASTM C 836</td>
</tr>
<tr>
<td>Adhesion</td>
<td>5 lbs/in width</td>
<td>ASTM C 836</td>
</tr>
<tr>
<td>Permeability</td>
<td>0.1 dry perms</td>
<td>ASTM E 96</td>
</tr>
<tr>
<td>Elongation</td>
<td>600%</td>
<td>ASTM D 412</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>150 psi</td>
<td>ASTM D 412</td>
</tr>
<tr>
<td>Shore Hardness</td>
<td>85</td>
<td>ASTM C 836</td>
</tr>
</tbody>
</table>

**CARE OF TOOLS:**
Tools and other equipment should be thoroughly cleaned with Karna-Klean or mineral spirits, taking necessary precautions when handling combustible materials.

**PACKAGING:**
KARNAK One-Kote is available: 5 gallon pail (18.95 L) Store in control environment (90°F max)

**If further information is needed, contact Karnak Technical Services at 1-800-526-4236.**
DESCRIPTION:
Karnak 229AR-Elastomeric is a single component, rubber reinforced asphalt that forms a highly elastomeric waterproof coating as well as an air barrier. The dried film cures to a tough 40-mil flexible finish and will resist variations in temperature and weather. When applied to interior above grade cavity wall structures, the protective coating helps to control moisture and inhibit air leakage in buildings as specified in a number of building codes. Karnak 229AR Elastomeric has excellent resistance to acids, alkalies and salts in the soil and will not deteriorate.

USES:
Karnak 229AR Elastomeric is available in brush and trowel grades. Karnak 229AR-Elastomeric is used as a waterproof coating on exterior above or below grade surfaces such as masonry, spray polyurethane foam, wood, stone, brick and concrete. Karnak 229AR Elastomeric can also be used as an air barrier/vapor barrier when applied in exterior/interior above grade assemblies.

SURFACE PREPARATION:
Surfaces must be clean, dry and free from oil, grease, release agents, laitance, dirt, dust and debris. All cracks and holes should be filled with Karnak 229AR-Elastomeric trowel grade prior to surface coating.

APPLICATION:
Karnak 229AR Elastomeric Brush Grade should be mechanically mixed thoroughly, prior to application. For vertical applications use only 229AR Elastomeric Trowel Grade.

EXAMPLES:
A. Exterior Vertical Surfaces - Apply Karnak 229AR Elastomeric, trowel grade in one coat. If applying two, allow the first coat to dry. Coating must be continuous and free of pinholes or holidays. Cover all slots, joints and grooves and into all chases and corners. Apply at the rate of 4 to 5 gallons per 100 sq. ft.
B. Membrane Vertical Surfaces - Apply 1 coat of Karnak 229AR Elastomeric Trowel grade at the rate of 2 to 3 gallons per 100 sq. ft. Place Karnak 3036 Poly-Mat or Karnak 31 Fiberglass Membrane vertically over surfaces of coating making sure all edges are overlapped at least 3 inches. Smooth membrane firmly into place and eliminate all wrinkles. Apply second coat at the rate of 2 to 3 gallons per 100 sq. ft. In areas where hydrostatic pressure is known to occur, 229AR Elastomeric should be installed in a membrane system to all exterior
229AR Elastomeric

- Waterproofing foundation walls.
- C. Horizontal Surface: Karnak 229AR Elastomeric Brush grade can be used as a waterproofing layer between the surface course and base structural concrete slab above and below grade. Apply at a rate of 4 to 5 gallons per 100 sq. ft.

**SPECIFICATIONS:**
- ASTM D-4586 Type I; ASTM D-4479 Type I, ASTM D-3409
- Complies with CH. 13 of Massachusetts Energy Code

**PHYSICAL PROPERTIES:**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight Per Gallon</td>
<td>8.6 lbs.</td>
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<tr>
<td>Hardness, Shore A</td>
<td>55 ASTM D-2240</td>
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<tr>
<td>Elongation</td>
<td>350% ASTM D-412</td>
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<tr>
<td>Tensile Strength, PSI</td>
<td>400 ASTM D-412</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
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<tr>
<td>Water Vapor Permeance</td>
<td>0.017 perm ASTM E-96</td>
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<tr>
<td>Air Permeability (Leakage)</td>
<td>0.000 L/(s·m²) @ pressure difference of 75pa</td>
</tr>
<tr>
<td>Service Temp. Range</td>
<td>-40°F to 160°F</td>
</tr>
<tr>
<td>Solids</td>
<td>Trowel 70%, Brush 63%, Spray 60% ASTM D-2967</td>
</tr>
</tbody>
</table>

**VOC Content:**
- Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

- Salt Fog Resistance 1/16 cured film: 500 hours – Excellent
- Abrasion Resistance: Excellent
- Resistance to acid:
  - 10% HCl: Excellent
  - 10% H2SO4: Excellent
  - 10% - 85% Phosphoric: Good
  - Nitric Acid: Not Recommended
- Resistance to Alkalies:
  - 10% NA OH: Excellent
  - Nitric Acid: Not Recommended
  - Resistance to Alkalies: 60 days – Excellent
  - 10% NA OH: Excellent
  - 45% Ammonium Nitrate: Excellent
  - 10% Ammonium Sulfate: Excellent
229AR Elastomeric

**NOTE:** For horizontal waterproofing and below grade waterproofing, a protection board is highly recommended to protect the film during backfilling or while pouring the concrete topping slab.

**CAUTION:**

**CARE OF TOOLS:**
Tools and other equipment should be thoroughly cleaned with mineral spirits or Karna-Klean, taking necessary precautions when handling combustible material.

**PACKAGING:**
Available in 1 gallon, 3 gallon & 5 gallon pails, 55 gallon drums and 30 oz. caulking cartridges.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**

Karnak #19 Ultra Caulk is the next generation asbestos-free rubberized asphalt caulking cement. Scientifically compounded with a selection of rubber reinforced asphalt, mineral fibers, and refined solvents, Karnak #19 Ultra caulk is manufactured to a thick yet pliable consistency for ease of application by caulk gun. #19 Ultra caulk provides a durable elastomeric sealant of greater strength, excellent adhesion and high resistance to water and weathering.

Karnak #19 Ultra caulk is composed of special chemical ingredients which give it a unique water displacement quality *(Wet/Dry)*. Karnak #19 Ultra caulk dries to a tough, flexible, waterproof and corrosion proof rubberized sealant which gives maximum protection and excellent performance over wide ranges of temperature and weather conditions.

**FEATURES, BENEFITS AND ADVANTAGES:**

- Ideal as a shingle tab adhesive
- Sticks under water the first time
- Rubberized - elastomeric
- Wet or dry application
- Improved low-temperature flexibility
- Improved water and weather resistance
- Will not shrink or crack
- Smooth, easy to apply
- Excellent adhesion
- Excellent resistance to flow (sag) at high roof temperatures
- Ready to apply
- Greater strength
- Asbestos-Free
- VOC compliant
- ASTM compliant

**USES:**

Karnak #19 Ultra Caulk is a general purpose asbestos-free flashing cement caulk for repairing leaks in shingles, concrete, metal or asphalt roofs, flashings on walls, chimneys, flues, skylight flashings, downspouts and cornices.

#19 Ultra caulk is excellent for sealing cracks in concrete and brick, as a joint filler for precast roof slabs, for repair, patch and flashing detail on SBS and APP modified membranes and for general purpose use in maintenance of exposed buildings and structures.
SURFACE PREPARATION:
Although it can be applied underwater for emergencies, it is best if all surfaces are clean, dry and free from oil, grease, dust, dirt, loose paint or foreign matter.

APPLICATION:
Spread Karnak #19 Ultra caulk to an average thickness not to exceed 1/4” and work or press tightly into joints, seams or cracks using a caulking tool. Application rate of a 1/4” x 1/4” head of caulk will yield approximately 25 lin. ft. per 10 oz. caulking cartridge. Coverage rate may vary depending on desired thickness and surface being caulked.

SPECIFICATIONS:
ASTM D-4586 Type I Class I & Class II
ASTM D-3409
Fed Spec SS-C-153 Type 1 (Asbestos-Free)

PHYSICAL PROPERTIES:
Consistency: A smooth rubber-like caulk consistency which will readily spread on and adhere to vertical and horizontal surfaces without sagging.

Character of Dried Film: Excellent adhesion to masonry, steel, cured concrete, shingles, asphalt roofing, skylight flashings and a variety of other surfaces.

Film Performance Characteristics: The dried film retains its elasticity and ductility so that the material will resist extreme variations in temperature and weather.

Sag Resistance: Excellent resistance to flow at high roof temperatures on vertical surfaces.

Homogenized: Thoroughly mixed and consistent throughout.

Consistency: 19 Ultra caulk is always smooth and free of lumps.
19 Ultra Rubberized Asphalt Caulk (wet/dry)

CAUTION:
Combustible Mixture: Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately.


CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials. To clean hands use #709 Karnak Karna-Klean or a waterless hand cleaner.

PACKAGING:
Available in 10.1 oz. cartridges.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
41 WEB-Caulk (Water-Based Elastomeric Barrier, Low VOC)

DESCRIPTION:
Karnak 41 WEB-Caulk is a single component, elastomeric asphalt emulsion caulk-grade cement for roofing, dampproofing, and waterproofing. This smooth and easy to gun caulk gun dries to a durable sealant exhibiting excellent strength and adhesion. 41 WEB-Caulk outperforms traditional asphalt flashing cement caulks in performance and longevity.

FEATURES, BENEFITS AND ADVANTAGES:
• Excellent Adhesion
• Improves Weather and Water Resistance
• Sag Resistant
• Low Odor
• Outstanding Flexibility
• Will Not Shrink or Crack
• Meets ASTM D-1227 Type II Class I
• VOC Compliant, CARB and SCAQMD Compliant

USES:
Karnak 41 WEB-Caulk is a general purpose flashing cement caulk for repairing leaks in shingles, concrete, metal or asphalt roofs, flashings on walls, chimneys, flues, skylight flashings, downspouts and cornices. Use to seal cracks in concrete and brick and as a joint filler for precast roof slabs and for flashing details on asphalt roofs as well as for general purpose use in the maintenance of exposed buildings and structures. Do not use in areas subject to water ponding.

SURFACE PREPARATION:
All surfaces to be caulked must be dry, clean and free from mildew, loose paint or coatings, oil, grease, rust, dirt, and other foreign matter.

APPLICATION:
Cut spout at an angle to desired bead size and load into a standard caulking gun. Karnak 41-WEB Caulk should be applied with even pressure directly over the crack or joint. An application rate of ¼” x ¼” bead of caulk will yield approximately 25 lin. ft. per 10.1oz caulking cartridge. Coverage rate may vary depending on desired thickness and surface to be caulked. Apply when temperatures of the caulk, substrate and ambient air are 40°F and rising.

SPECIFICATIONS:
ASTM D-1227 Type II Class I
41 WEB-Caulk  (Water-Based Elastomeric Barrier, Low VOC)

CAUTION:
Do not apply to wet surfaces or when rain or freezing temperatures are expected within 24-36 hours. Cold temperatures and high humidity will retard curing. Protect unused product from freezing. Coating must be cured before exposure to water. Store in a heated room between 50ºF and 100ºF.

Keep container away from heat. Avoid prolonged contact with skin. Wash exposed areas with soap and water. Avoid breathing vapors in confined areas. If product gets into eyes, immediately flush with large amounts of water while holding the eyelids open then seek medical attention. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. Dispose of in an environmentally safe manner. Read Material Safety Data Sheets before using this product.

CARE OF TOOLS:
Tools and caulking gun should be cleaned with soapy warm water immediately after use. Dried caulk will be difficult to remove but can be accomplished by scrapping or cleaning with mineral spirits. Take necessary precautions when handling combustible materials.

PACKAGING:
Available in 10.1 oz. caulking cartridges.

VOC:
5gm/L

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak 44 Klear Seal Caulk is a multi-purpose, terpolymer acrylic caulking that’s specially formulated to provide a clear water-resistant seal. It’s manufactured to a smooth, creamy consistency for ease of application by standard caulking gun. Karnak 44 Klear Seal Caulk provides outstanding adhesion and flexibility for long service life.

FEATURES, BENEFITS AND ADVANTAGES:
• Clear, Translucent Color
• Low Odor, for Exterior and Interior Applications
• Paintable
• Outstanding Flexibility
• Excellent Adhesion
• Quick-Drying
• Meets ASTM C-834
• VOC Compliant, CARB and SCAQMD Compliant

USES:
Karnak 44 Klear Seal Caulk can be used for exterior and interior applications for creating a water resistant seal on wood, drywall, plaster, brick, concrete, masonry, tile and metal surfaces above grade. It’s sag resistant properties and clear color make it an excellent sealant for cracks around windows, doors, trim, molding, window air conditioners, metal chimney flashings, siding and general-purpose use for vertical applications. Do not use in areas subject to water ponding.

SURFACE PREPARATION:
All surfaces to be caulked must be dry, clean and free from mildew, loose paint or coatings, oil, grease, rust, dirt, and other foreign matter.

SPECIFICATIONS:
ASTM C-834
APPLICATION:
Cut spout at an angle to desired bead size and load into a standard caulking gun. Karnak 44 Klear Seal Caulk should be applied with even pressure directly over the crack or joint. Before the caulk begins to skin over, tool with even pressure directly over the crack or joint. Before the caulk begins to skin over, tool with even pressure to create a positive seal with the substrate. Excess caulk should be wiped away with a damp cloth before skinning over. An application rate of a ¼” x ¼” bead of caulk will yield approximately 25 lin. ft. per 10.1 oz caulking cartridge. Coverage rate may vary depending on desired thickness and surface to be caulked. Apply when temperatures of the caulk, substrate and ambient air are 40°F and rising. Karnak 44 Klear Seal Caulk dries quickly to the touch in about 1 hour and may be painted over after 4-6 hours dry time (depending on temperature and humidity).

PHYSICAL PROPERTIES:
Weight Per Gallon: 13.0 lbs./gal.
Solids By Weight: 80% (+/- 2%)
Solids By Volume: 71% (+/- 2%)
Color: Clear
Elongation: 365%
Tensile Strength: 175 psi
Shore Hardness: 48
Cure Time: 24 to 36 hours @ 77°F and 50% Relative humidity
Service Temp.(Cured Film): 0°F to 200°F
CAUTION:
Do not apply to wet surfaces or when rain or freezing temperatures are expected within 24-36 hours. Cold temperatures and high humidity will retard curing. Protect unused product from freezing. Coating must be cured before exposure to water. Store in a heated room between 50ºF and 100ºF.

Keep container away from heat. Avoid prolonged contact with skin. Wash exposed areas with soap and water. Avoid breathing vapors in confined areas. If product gets into eyes, immediately flush with large amounts of water while holding the eyelids open then seek medical attention. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. Keep out of reach of children. Keep container covered when not in use. Dispose of in an environmentally safe manner. Read Material Safety Data Sheets before using this product.

CARE OF TOOLS:
Tools and caulking gun should be cleaned with soapy warm water immediately after use. Dried caulk will be difficult to remove but can be accomplished by sanding, scraping or other mechanical means.

PACKAGING:
Available in 10.1 oz. caulking cartridges.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
79 Wood Block Mastic

DESCRIPTION:
Karnak #79 Wood Block Mastic is prepared from carefully selected asphalts, solvents and mineral fillers. These components are mechanically mixed thoroughly and passed through a high speed homogenizer ensuring a smooth, trowel consistency product free from foreign matter and lumps.

USES:
Karnak #79 Wood Block Mastic is a highly adhesive asphalt cement expressly designed for mastic use in cold application of wood block flooring.

APPLICATION:
The temperature of Karnak #79 Wood Block Mastic when applied should be above 70F. If necessary, Karnak #79 Wood Block Mastic may be warmed by storing containers in a heated room prior to application. Concrete floors must be dry, sound, level, clean and at least 30 days old, with a good wood float finish or equal. Grease, oil stains and dust must be removed, and high spots levelled. Low areas should be filled with concrete patching mix. Let dry thoroughly after cleaning or patching. Dusty or very porous surfaces should be primed with Karnak #108 Asphalt Primer at the rate of 1/2 to 1 gallon per 100 sq. ft. Karnak #108 Asphalt Primer must be fully cured, (dry to the touch), before application of Karnak #79 Wood Block Mastic.

COVERAGE:
Karnak #79 Wood Block Mastic should be applied directly from the container. Spread at the rate of 1 gallon per 40 to 50 sq. ft. using a 1/16 inch serrated mastic trowel with a sawtooth pattern. Apply the Karnak #79 Wood Block Mastic only at recommended rates of coverage. An inadequate amount will result in poor bonding, while an excessive amount may cause bleeding of the mastic between the blocks.

Karnak #79 Wood Block Mastic must be allowed to dry a minimum of at least 2 to 3 hours or until the surface is dry to the touch. Installation of the wood blocks to the Karnak #79 Wood Block Mastic may be safely delayed up to 24 hours if desired. Drying is hastened if adequate ventilation is provided. Do not apply blocks to wet or excessive Karnak #79 Wood Block Mastic.

Application instructions of the wood block manufacturer take precedence and should be followed in close detail to ensure a satisfactory application.
CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Sealants, Caulking, Flooring

105 Tac-Kote

DESCRIPTION:
Karnak #105 Tac-Kote is a cold applied asphalt cut-back designed specifically as a primer/adhesive for use under asphalt based roadways.

FEATURES, BENEFITS AND ADVANTAGES:
Karnak #105 Tac-Kote penetrates capillaries to bind and seal dusty surfaces to provide the correct base for subsequent toppings.

SURFACE PREPARATION:
Surfaces to be treated with Karnak #105 Tac-Kote should be oil and moisture free in order to assure proper penetration.

APPLICATION:
Karnak #105 Tac-Kote is easily applied by brush, squeegee or spray. Apply at the rate of 1 to 1.5 gallons per 100 sq. ft. Actual rate may vary due to the nature of the substrate.

COVERAGE:
Apply at the rate of 1 to 1.5 gallons per 100 sq. ft.

SPECIFICATIONS:
ASTM D-2028 RC-250
AASHTO M-81

CAUTION:

CARE OF TOOLS:
Spray equipment, brushes and other tools may be cleaned, and the dried asphalt film removed with mineral spirits.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
160.1 Amphibicaulk (wet and dry)

DESCRIPTION:
Karnak #160.1 Amphibicaulk is a carefully prepared caulking-grade roof cement with special water displacing characteristics, which ensures an effective bond to both wet and dry surfaces. The ability to adhere during inclement weather conditions makes Karnak #160.1 Amphibicaulk the first choice of both roofing contractors and plant engineers. Karnak #160.1 Amphibicaulk is composed of selected asphalt, mineral fillers combined with refined solvent, and special chemical ingredients, which give it a unique water displacement quality.

USES:
Karnak #160.1 Amphibicaulk is a cold process, heavy bodied, caulk-grade roof cement ideal for sealing leaks in and around asphalt built-up roofs, joints, chimney cracks, skylights, vents, down-spouts and gutters. The dried film retains its flexibility and ductility, so the caulking will resist extreme variations in temperature and weather. Karnak #160.1 Amphibicaulk may also be used to improve wind resistance on low slope shingle roofs.

SURFACE PREPARATION:
All surfaces should be clean and free from oil, grease, rust, dirt, and other foreign matter. Excess water should be removed, if possible, before application of Karnak #160.1 Amphibicaulk.

APPLICATION:
Karnak #160.1 Amphibicaulk is ready to use directly from the container. No heating is required. Apply Karnak #160.1 Amphibicaulk directly over the cracks with a caulking gun.

SPECIFICATIONS:
ASTM D-4586 Type I Class I & Class II
ASTM D-3409
Federal Specification SS-C-153 Type I (except Non-Asbestos)
CAUTION:

CARE OF TOOLS:
Caulking guns and equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 10.1 oz. caulking cartridges.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
Karnak 229AR-Elastocaulk is a single component, rubber reinforced asphalt that forms a highly elastomeric waterproof caulk. The dried film cures to a tough, flexible finish and will resist variations in temperature and weather. Karnak 229AR Elastocaulk has excellent elongation properties, good cold weather pliability and excellent water and weather resistance.

**FEATURES, BENEFITS AND ADVANTAGES:**
- Easy to apply.
- Tough, flexible, elastic, rubber-like film.
- Excellent adhesion to many surfaces including concrete, masonry, metal, BUR asphalt roofs, APP and SBS modified bitumen membrane and spray polyurethane foam.
- Excellent weather resistance.
- Excellent water and water vapor resistance.

**USES:**
Karnak 229AR Elastocaulk is ideal for sealing leaks in and around asphalt built-up roofs, metal drip edge, metal trim, fasteners and screws, chimney cracks, concrete and masonry cracks, skylights, vents, down-spouts, gutters, expansion joints and other areas where nominal or slight movement is anticipated.

**SURFACE PREPARATION:**
Surfaces must be clean, dry and free from oil, grease, release agents, laitance, dirt, dust and debris. Metal should be wiped clean to remove oily residues. Dusty and/or porous surfaces may need to be primed prior to application with 108 Asphalt Primer.

**SPECIFICATIONS:**
ASTM D-4586 Type I

**APPLICATION:**
Karnak 229AR Elastocaulk should be applied directly in an over cracks using an appropriate caulking gun.

**COVERAGE:**
Application rate of a 1/4” x 1/4” bead of caulk will yield approximately 75 lineal feet per 30 oz. caulking cartridge. Coverage rate may vary depending on desired thickness and surface being caulked.
229AR-Elastocaulk

PHYSICAL PROPERTIES:
Weight Per Gallon: 8.6 lbs.
Hardness, Shore A: 55 ASTM D-2240
Elongation: 350% ASTM D-412
Tensile Strength, PSI: 400 ASTM D-412
Color: Black
Water Vapor Permeance: 0.017 perm ASTM E-96
Air Permeability (Leakage): 0.000 L/(s·m²) @ pressure difference of 75 Pa
Service Temp. Range: -40°F to 160°F
Solids: 70% ASTM D-2697
VOC Content: Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current

VOC regulations
Salt Fog Resistance 1/16 cured film: 500 hours – Excellent
Abrasion Resistance: Excellent
Resistance to acid:
10% HCL: Excellent
10% H2SO4: Excellent
10% - 85% Phosphoric: Good
Nitric Acid: Not Recommended
Resistance to Alkalis:
10% NA OH: Excellent
45% Ammonium Nitrate: Excellent
10% Ammonium Sulfate: Excellent

CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits or Karna-Klean, taking necessary precautions when handling combustible material.

PACKAGING:
Available in 30 oz. caulking cartridges.

Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karna-Flex Caulk is an elastomeric, thermoplastic-rubber sealant formulated for use on properly prepared metal, concrete, spray polyurethane foam and plywood roof substrates. Its ease of application, superior adhesion, elasticity and durability make Karna-Flex Caulk an ideal repair sealant.

FEATURES, BENEFITS AND ADVANTAGES:
• One component—no need to intermix with other materials.
• Easy application by caulking gun.
• Superior film—forms a durable, weather resistant elastomeric membrane.
• Has superior adhesive and cohesive strength.
• Low temperature flexibility—specially selected polymers and resins impart superior low temperature properties to the coating.

USES:
Karna-Flex’s elastomeric properties make it an excellent sealant for prepared metal, concrete as well as EPDM, TPO and most PVC membrane roof system seams and flashings. Also use on spray polyurethane foam and plywood roof system details. Ideal for sealing and waterproofing metal roof seams and splits, gutters, fasteners, pinholes in metal, flashing and curb details. Also use to seal around skylights, penetrations and roof top equipment.

NOTE:
TPO and PVC membrane must be at least 4 years old before using on. Karna-Flex is not recommended for use over asphaltic substrates. Contact Karnak Corporation for alternative systems.

SURFACE PREPARATION:
All surfaces to be sealed must be clean, dry and free from oil, grease and other foreign matter.

APPLICATION:
Apply directly in and/or over cracks using an appropriate caulking gun.

COVERAGE:
Application rate of a ¼” x ¼” bead of caulk will yield approximately 75 lineal feet per 30 oz. caulking cartridge. Coverage rate may vary depending on desired thickness and surface being caulked. Allow to cure 24 hours.
PHYSICAL PROPERTIES:

- **Weight per Gallon:** 9.5 lbs
- **Color:** White
- **Tensile Strength:** 40 psi
- **Elongation:** 500%
- **Low Temp Flex:** 0°F
- **ASTM-C-734:** No cracking/pass
- **Recovery:** 75% min.
- **VOC:** Please visit www.karnakcorp.com for latest VOC content as products are updated to comply with the most current VOC regulations

CAUTION:
Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, do not induce vomiting. Call a physician immediately. KEEP OUT OF REACH OF CHILDREN. Keep container covered when not in use. Do not thin. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) “THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING.”

PACKAGING:
Karna-Flex: 30 oz. Caulking Cartridges

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
230-2% Neo-Asphalt (trowel grade)

DESCRIPTION:
Karnak #230-2% Neo-Asphalt is a cold applied, rubberized asphalt cement, designed especially for use as an adhesive for paving blocks and pressed asphalt bricks. Eliminates the need for a hot kettle.

SURFACE PREPARATION:
All surfaces should be clean, free from oil, grease or other foreign matter.

APPLICATION:
Karnak #230-2% Neo-Asphalt can be applied to either concrete or macadam (blacktop) using a 1/16” serrated trowel. For best results, Karnak #230 2% Neo-Asphalt should be allowed to have a minimum of 2-3 hours open air time or until material becomes tacky and just skins over, prior to embedding the asphalt bricks.

COVERAGE:
Apply at the rate of 1.5 - 2 gallons per 100 sq. ft. Do not exceed coverage rate.

PHYSICAL PROPERTIES:
Viscosity @ 25C: 30,000-40,000 C.P.S.
Specific Gravity @ 25C: 1.02
Weight per Gallon @ 25C: 8.5 lbs.
% Solids by Weight: 68%
Softening Point of Rubber Blend: 150F
% Inorganic Material: 18%
% Long Fiber: 10%
% Neoprene: 2% min.

CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236. Please see page 222 for additional mold and safety information.
DESCRIPTION:
Karnak #237-2% Neo-Asphalt is an asbestos-free cold applied, rubberized asphalt cement, designed especially as an adhesive for paving blocks and pressed asphalt bricks, eliminating the need for a hot kettle.

SURFACE PREPARATION:
All surfaces should be clean, dry, free from oil, grease or other foreign matter.

APPLICATION:
Karnak #237-2% Neo-Asphalt can be applied to either concrete or macadam (blacktop) using a brush or squeegee. For best results, allow a minimum of 2-3 hours open air time or until material becomes tacky and just skins over prior to embedding the paving blocks.

COVERAGE:
Apply at the rate of 1.5 - 2 gallon per 100 sq. ft. Do not exceed coverage rate.

PHYSICAL PROPERTIES:
Viscosity @ 25C: 12,000-18,000 C.P.S.
Specific Gravity @ 25C: 1.02
Weight per Gallon @ 25C: 8.1 lbs.
% Solids by Weight: 70%
Softening Point of Rubber Blend: 150F
% Inorganic Material: 6.5%
% Long Fiber: 10%
% Neoprene: 2% min.

NOTE:
Karnak #237-2% Neo-Asphalt should be thoroughly mechanically mixed prior to application. Macadam (blacktop) surfaces should be cured prior to applying Karnak #237-2% Neo-Asphalt.
Read Material Safety Data Sheets before using this product.

237-2% Neo-Asphalt (brush grade)

CAUTION:

CARE OF TOOLS:
Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
31 Fiberglass Membrane

DESCRIPTION:
Karnak #31 Fiber Glass Membrane is a waterproofing fabric woven entirely of fiberglass yarn. It is ideal for use with cold application cements and coatings, and being of high flexibility, conforms to all contours and bends as required in general roofing and waterproofing maintenance.

FEATURES, BENEFITS AND ADVANTAGES:
• Contour flexibility without cracking
• High tensile strength
• Will not mildew, rot or decay
• Acid and alkali resistant

SPECIFICATIONS:

PHYSICAL PROPERTIES:
(oz. /sq. /yd): 2.00
(lbs./36" x 150’ roll): 6.5
Thread Count per Inch: 20 x 10

TENSILE STRENGTH:
Warp (lbs./lineal inch): 75
Fill (lbs./lineal inch): 75

COMPATIBILITY:
Karnak #31 Fiber Glass Membrane is treated with a synthetic resin in the proper balance to give complete compatibility with asphalt or tar and all accepted waterproofing and coating compounds.

Weight and tensile strength figures are nominal values. Production variations limited to plus or minus 10% of these figures.

PACKAGING:

<table>
<thead>
<tr>
<th>ROLL SIZE</th>
<th>ROLLS/CARTON</th>
</tr>
</thead>
<tbody>
<tr>
<td>36&quot; X 150’</td>
<td>6</td>
</tr>
<tr>
<td>18’ X 150’</td>
<td>6</td>
</tr>
<tr>
<td>12’ X 150’</td>
<td>6</td>
</tr>
<tr>
<td>9” X 150’</td>
<td>12</td>
</tr>
<tr>
<td>6” X 150’</td>
<td>12</td>
</tr>
<tr>
<td>4” X 150’</td>
<td>18</td>
</tr>
</tbody>
</table>

Please see page 222 for additional mold and safety information.
34 Utility Grade Cotton Fabric

DESCRIPTION:
Karnak #34 Utility Grade Cotton Fabric is a strong cotton fabric, thoroughly impregnated with highly specialized bitumens. This exclusive Karnak process permits the fabric to unroll easily, without distortion. It can be applied smoothly and without wrinkles. The open mesh construction of the fabric allows the surface coatings to penetrate through and interlock, thereby providing a firm mechanical bond between coatings, and insuring long life of the application. This strong elastic interlocking system is very pliable and prevents rupture due to expansion and contraction of the applied surfaces. Karnak #34 Utility Grade fabric was developed to meet the need for an economical, lighter weight fabric.

FEATURES, BENEFITS AND ADVANTAGES:
• High strength
• Won’t rot
• Can be torn by hand for easier application

USES:
Karnak #34 Utility Grade Fabric is useful for roof repairs, flashings, parapet walls, coverage of entire roof areas and for waterproofing of building foundations, retaining walls, and wherever construction is exposed to the elements.

AVAILABILITY:
Weight: 8-10 oz. per square yard.

SIZE/PACKAGE
<table>
<thead>
<tr>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>36” X 150’</td>
<td>1 roll/ctn.</td>
</tr>
<tr>
<td>18” X 150’</td>
<td>2 rolls/ctn.</td>
</tr>
<tr>
<td>12” X 150’</td>
<td>4 rolls/ctn.</td>
</tr>
<tr>
<td>9” X 150’</td>
<td>4 rolls/ctn.</td>
</tr>
<tr>
<td>6” X 150’</td>
<td>8 rolls/ctn.</td>
</tr>
<tr>
<td>4” X 150’</td>
<td>12 rolls/ctn.</td>
</tr>
</tbody>
</table>

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
Read Material Safety Data Sheets before using this product.

3036 Poly-Mat

DESCRIPTION:
Karnak 3036 Poly-Mat is a firm finish stitch bonded textile material composed of polyester fiber to form a strong reinforcing fabric with cold roofing mastics and liquid elastomers. While the chemical and thermal properties of Karnak 3036 Poly-Mat are essentially those of polyester fiber, the product’s stitch bonded structure endows it with an extraordinary combination of physical properties.

The distinctive characteristics of Karnak 3036 Poly-Mat include high tensile strength compiled with high elongation, outstanding tear strength and toughness, high bulk and porosity, non-raveling edges, and excellent dimensional stability. This product is ideal for replacing felts and fiberglass as reinforcing mats on smooth surfaces such as BUR, modified bitumen membranes and concrete surfaces.

FEATURES, BENEFITS AND ADVANTAGES:
1. High tensile strength and toughness.
2. High breaking elongation.
3. Excellent tear strength.
5. No fiber breakage or dusting in handling.
7. Outstanding resistance to cold cracking, chemicals and solvents.
8. Properties are not affected by water.
10. High resistance to splitting or cracking from thermal shock, low temperatures, freeze/thaw cycles, folding, creasing and rough handling.
11. Resistance to chemicals and solvents found in asphalt, tar and cold applied systems, as well as lubricants for rooftop motors and air conditioners.
12. Outstanding resistance to rot and water damage.

PHYSICAL PROPERTIES:
Weight: 2.9 oz. per square yard
Elongation: 26% ASTM D-1682
Tear Strength (Trapezoid): 14 lbs. ASTM D-1117
Mullen Burst: 127 lbs. ASTM D-3786
Tensile Strength: 41 lbs. ASTM D-1682
3036 Poly-Mat

AVAILABILITY:
Weight: 2.9 oz. per square yard

SIZE/PACKAGE:
- 4” x 180’ (60 ft² / 6.7 yd²) 9 rolls/carton
- 6” x 180 (90 ft² / 10 yd²) 6 rolls/carton
- 9” x 180’ (135 ft² / 15 yd²) 4 rolls/carton
- 12” x 180’ (180 ft² / 20 yd²) 3 rolls/carton
- 18” x 180’ (270 ft² / 30 yd²) 2 rolls/carton
- 40” x 180’ (5.5 square)(600 ft² / 66.7 yd²) 1 roll/carton

TECHNICAL DATA:
Chemical
- Benzene
  Exposure at Temp.: 1,000 hrs @ 70°F
  Effect on Strength: None
- Ethyl Alcohol
  Exposure at Temp.: 1,000 hrs @ 70°F
  Effect on Strength: None
- Coal Tar
  Exposure at Temp.: 1,000 hrs @ 70°F
  Effect on Strength: None
- Gasoline (leaded)
  Exposure at Temp.: 1,000 hrs @ 70°F
  Effect on Strength: None
- 10% Hydrochloric Acid
  Exposure at Temp.: 1,000 hrs @ 70°F
  Effect on Strength: None
- Saturated Sodium Chloride
  Exposure at Temp.: 1,000 hrs @ 70°F
  Effect on Strength: None
- 1% Sodium Carbonate
  Exposure at Temp.: 10 hrs @ 210°F
  Effect on Strength: None
- Ethylene Glycol
  Exposure at Temp.: 10 hrs @ 200°F
  Effect on Strength: None
- Kerosene
  Exposure at Temp.: 10 hrs @ 200°F
  Effect on Strength: None
- Xylene
  Exposure at Temp.: 10 hrs @ 200°F
  Effect on Strength: None

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
5540 Resat-Mat

DESCRIPTION:
Karnak 5540 Resat-Mat is a stitch bonded textile material composed of polyester fiber to form a strong reinforcing fabric with cold roofing mastics and liquid elastomers. Composed of 100% polyester, Karnak 5540 Resat-Mat has excellent conformability, making it ideal for replacing felts and fiberglass as reinforcing mats on rough surfaces such as embedded gravel and corrugated metal roof decks. The distinctive characteristics of Karnak 5540 Resat-Mat include high tensile strength compiled with high elongation, outstanding tear strength and toughness, high bulk and porosity, non-raveling edges and excellent dimensional stability.

FEATURES, BENEFITS AND ADVANTAGES:
1. High tensile strength and toughness
2. High breaking elongation
3. Excellent tear strength
4. Non-raveling
5. No fiber breakage or dusting in handling
6. Lightweight
7. Outstanding resistance to cold cracking, chemicals and solvents
8. Properties are not affected by water
9. Non-irritating to the skin
10. High resistance to splitting or cracking from thermal shock, low temperatures, freeze/thaw cycles, folding creasing and rough handling
11. Resistance to chemicals and solvents found in asphalt, tar and cold applied systems, as well as lubricants for roof top motors and air conditioners
12. Outstanding resistance to rot and water damage.

PHYSICAL PROPERTIES
Weight oz/yd2: 3.00
Elongation: 62%  ASTM D-1682t
Tear Strength(Trapezoid): 16 lbs.  ASTM D-1117
Mullen Burst: 177 lbs.  ASTM D-3786
Tensile Strength: 57 lbs.  ASTM D-168
Read Material Safety Data Sheets before using this product.

5540 Resat-Mat

TECHNICAL DATA:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Exposure at Temp.</th>
<th>% MD Grab Breaking</th>
<th>Strength Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td>1% Sodium Hydroxid</td>
<td>6 hrs. @ RT</td>
<td></td>
<td>99</td>
</tr>
<tr>
<td>60% Sulfuric Acid</td>
<td>100 hrs. @ RT</td>
<td></td>
<td>82</td>
</tr>
<tr>
<td>Distilled Water</td>
<td>1000 hrs. @ RT</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>70% Nitric Acid</td>
<td>6 hrs. @ RT</td>
<td></td>
<td>97</td>
</tr>
<tr>
<td>Acetone</td>
<td>1000 hrs/ @ RT</td>
<td></td>
<td>98</td>
</tr>
<tr>
<td>Carbon Tetrachloride</td>
<td>1000 hrs. @ RT</td>
<td></td>
<td>99</td>
</tr>
<tr>
<td>Dimethy Formamide</td>
<td>1000 hrs. @ RT</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>1000 hrs. @ RT</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>1000 hrs. @ RT</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Polychlorethylene</td>
<td>1000 hrs. @ RT</td>
<td></td>
<td>93</td>
</tr>
</tbody>
</table>

AVAILABILITY:
Weight: 3.00 oz. per square yard

SIZE/PACKAGE:

<table>
<thead>
<tr>
<th>Size</th>
<th>Description</th>
<th>Area (ft² / yd²)</th>
<th>Units / Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>40” x 324’ (10 square)</td>
<td>(1080 ft² / 120 yd²)</td>
<td>1 roll / carton</td>
<td></td>
</tr>
<tr>
<td>6” x 300’</td>
<td>(150 ft² / 16.7 yd²)</td>
<td>6 rolls / carton</td>
<td></td>
</tr>
<tr>
<td>4” x 300’</td>
<td>(100 ft² / 11.1 yd²)</td>
<td>9 rolls / carton</td>
<td></td>
</tr>
</tbody>
</table>

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

Please see page 222 for additional mold and safety information.
229AR-ELASTOMERIC

PART 1—GENERAL

1.1 Scope
A.) Work included: Provide Labor, materials, equipment and supervision necessary to install a waterproofing membrane and joint system below grade and in areas protected from sunlight on horizontal and vertical surfaces between two courses of concrete slab construction as in pedestrian concourses, parking garages, plaza decks, roof terraces and other areas such as tunnels, foundation walls, interior reflective pools and planters.

1.2 Description of System
A.) A monolithic, seamless waterproofing membrane resulting from the drying of a cold applied product having elastomeric properties.

1.3 Submittals
A.) Literature: Submit brochures and descriptive literature indicating the performance and application procedures.
B.) Test results: Provide test results indicating compliance with specified performance criteria.

1.4 Qualifications
A.) Manufacturers: To assure the quality of materials, these specifications are based upon Karnak brand products as manufactured by Karnak.
B.) Applicator: Shall be established contractor who has demonstrated past proficiency in success application of this type of material.

1.5 Site Conditions
A.) Environmental: Minimum ambient temperature for application shall be 40°F and rising.
   1. No exterior application shall be made when inclement weather is imminent.
B.) Safety Requirements: Contractor applying the membrane shall assume the responsibility of ensuring his personnel are aware of the precautions printed on the product container and in the product literature with regard to handling, inhalation, and bodily contact.
   1. The application contractor shall also provide any supplemental breathing
apparatus when applying waterproofing membrane in enclosed areas and any safety equipment designated by governmental agencies. (OSHA)

2. Refer to MSDS for other warnings and product information.

1.6 Limitations
Karnak's coatings and sealants should be protected from water until curing or elasticity has been attained. Failing to do so may result in improper curing.

A.) Do not apply to areas in which operating temperatures will exceed 160°F.
B.) To prevent sagging, use Karnak 229AR-Elastomeric Trowel Grade at a maximum rate of 4-6 gallons per 100 sq. ft. per application.
C.) Do not use where the products are exposed to oils, grease or organic solvents.
D.) Surface shall be free of moisture, dirt, oil and laitance.

PART 2—PRODUCTS

2.1 Materials
A.) Elastomeric waterproofing membrane: Shall be a one component asphalt SBS products marketed under the trade name of Karnak 229AR-Elastomeric, manufactured by Karnak Corp., Clark, N.J.

1. 229AR-Elastomeric: A one component asphalt/SBS modified, cold applied elastomeric product. This product produces a smooth, monolithic, seamless waterproofing membrane. Easily applied by brush, gauged squeegee or trowel. Material may be sprayed with heavy industrial airless mastic spray equipment at a minimum material temperature of 70°F. Suitable for horizontal application in any specified thickness. Vertical applications are limited to 4-6 gallons per 100 sq. ft. in a single application (trowel grade only.)

Elastomeric Joint Sealant: Shall be one component, cold applied asphalt SBS product marketed under the trade name of 229C A R-Elastocaulk and manufactured by Karnak, Clark, N.J.

2. 229 AR-Elastocaulk: A one component, cold applied elastomeric joint sealant. Application by extrusion from 30 oz. caulk cartridges suitable for horizontal, sloped or vertical joints.

Material Supplied by Others: The following materials are not manufactured or supplied by Karnak Corp. These products shall have a contractor - architect approval prior to application.
1. Filler: Polyethylene backer rod or equivalent.

2. Cant Strips: Shall be contractor - architect approved for use, where specified, at the junction of vertical walls and horizontal slabs.

3. Protection Board: Shall be contractor - architect approved in 1/8" or 1/4" thickness.

2.2 Mixing
Mixing of the material is critical. Poor mixing will result in improperly cured material. A heavy duty, low RPM drill with a 5" mixer is required for mixing the brush and spray grades.

Recommended mixer: Jiffy Mixer Co., available from Karnak Corp., Clark, NJ.

A.) Material should be mixed 3 to 5 minutes. Ensure the bottom, center and sides are well mixed.

2.3 Typical Properties and Performance
A.) AR-Elastomeric—See Product Data Sheet

2.4 Packaging
A.) 229AR-Elastomeric is packaged in 5 gallon pails and 55 gallon drums.

2.5 Material Delivery, Storage & Handling
A.) All products shall be delivered in original unopened containers clearly marked with the manufacturer's name, brand name and lot numbers.
B.) All products shall be stored in an enclosed area, protected from the elements and away from heat or open flame.

PART 3—EXECUTION

3.1 Substrate Preparation
A.) All surfaces to receive Karnak products shall be clean, dry and free of frost, dew, dirt, grease, release agents and other foreign contaminant and debris.
B.) Concrete shall have cured a minimum of 30 days. Water or paper curing of horizontal slabs is preferred.
C.) Masonry surfaces shall have flush joints free of extraneous mortar, chipped or broken masonry. Sharp ridges should be ground smooth.

1. Horizontal concrete surfaces shall be steel troweled or wood floated to a smooth level surface. Vertical surfaces shall be smooth, sound and free of honeycombs.
D.) Metal surfaces shall be free of rust, scale, paint or other forms of contamination.
E.) Construction & Expansion Joints: All construction and expansion joints shall be a minimum of 3/4" wide. Insert a polyethylene backer rod to the required depth. The sealant depth shall be at least equal to the width of the joint. Fill the joint with 229AR-Elastomeric joint sealant and allow to cure.
F.) Cracks and non-working joints (over 1/8") : All cracks and non-working joints over 1/8" width shall be filled with 229AR-Elastomeric when using an asphalt coating.
G.) Cant Strips: If Cant Strips are specified at the perimeter cover or other areas where vertical and horizontal surfaces meet, apply 229AR-Elastomeric to the slabs and up the vertical surface to within 1/2" of the floor line. Embed the cant strip into the wet coating. Coat the cant strip with a minimum 60 mil thickness of coating.

1. If cant strips are not specified, all perimeters or other areas where vertical and horizontal surfaces meet, inside and outside corners, shall be pre-stripped with glass mesh, embedded in 60 mil application of coating.

H.) Priming: Normally is not necessary for 229AR-Elastomeric. For surfaces that need to be primed contact Karnak Technical Services toll-free at 1-800-526-4236.

3.2 Membrane Application
Properly mixed Karnak products shall be applied by suitable means for the area involved and material chosen, either by spray, brush, trowel or gauged squeegee.

A.) Application rates shall be at the rate of 4 gallons per 100 sq. ft. Applications shall be over the entire substrate including pre-stripped areas, cants, etc.

3.3 Flood Test
Flood testing, if specified, should be instituted prior to placement of the protection board. Dam and flood the entire area with a minimum of 1" of water for a period of 24 to 48 hours. Inspect underside. If repairs are indicated, drain dry and re-apply membrane to leakage area.

3.4 Repair Procedure
The surface must be clean, dry and free from debris.

3.5 Membrane Protection
The finished waterproofing membrane shall be protected from the subsequent concrete pours and backfill operations by use of contractor - architect approved protection board of either 1/8" or 1/4" thickness.
3.6 Warranties
Karnak makes no warranty, expressed or implied, as to the quality, merchantability or fitness for any particular purposes of any product(s) referred to herein. No guarantee of satisfactory results from reliance upon recommendation or information contained in this literature. The buyer's exclusive remedy and Karnak's sole limit of liability for any losses resulting from said products shall be for the purchase of the product(s) causing loss.

3.7 Technical Service
Technical service is available by calling 1-800-526-4236, In NJ 1-732-388-0300.

The suggested recommendations for use of Karnak products are predicted on tests believed to be reliable. However, since application and use are beyond our control, we do not guarantee the results to be obtained.

The above specification is offered as a service to the specifier. Karnak Corporation does not practice architecture or engineering and recommends that you consult a registered architect, engineer and/or roofing consultant.

Please see page 222 for additional mold and safety information.
SOLVENT AND EMULSION BASED ASPHALT MATERIALS

NEWLY Poured Concrete:
All newly poured concrete or C.M.U. mortar joints should be cured a minimum of 30 days prior to applying any solvent based product and a minimum of 7 days before applying emulsion (water based) products. Curing agents containing wax, oil or pigments should not be used. All surfaces should be clean, dry and free from oil, grease, dust, loose paint laitance or other foreign matter.

PRIMING:
For surfaces that are very porous and/or dusty, it is recommended that an asphalt primer be utilized to provide a firm film base prior to coating with solvent base asphalt material. The asphalt primer used should be the same type as the coating system ie: solvent based coatings use a solvent based primer.

PROTECTION BOARD:
Regardless of the dampproofing/waterproofing material used, it is:
1. Highly recommended that a protection board be utilized to protect the film from damage prior to and during backfilling operations.
2. Allow the film to cure a minimum of 24 to 48 hours prior to backfilling.
3. Backfilling operation should take place within 7 days.

COVERAGE:
Additional applications of material can be applied to achieve a thicker film thickness after proper curing (minimum 24 hrs.) of the initial coat, and then after curing of each consecutive coat.

All products should be applied at the recommended coverage rate as stated in the manufacturers current printed literature.

WEATHER APPLICATION:
Materials should not be applied when rain is imminent. (Within 24 hours). Emulsion coatings must be cured fully before any exposure to water.

Emulsion based materials must be protected from freezing. Freezing of emulsion products prior to, or during application may result in product failure.
PROD U CT ALTE RING:
Coatings should in no way be altered or thinned. Any attempts at thinning these products can alter their designed physical properties, thereby resulting in possible product failure and/or shorten longevity of the cured material. Thinning of solvent base products is in direct violation of V.O.C. (Volatile Organic Compound) compliance laws and/or regulations. Thinning of products will void all warranties.

CA U TIO N:
Keep containers tightly covered when not in use. Do not use solvent base material near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If taken internally, call a physician immediately. Use solvent base products in a well ventilated area. Always dispose of discarded material in an environmentally safe manner. Read and follow current printed literature of the product being used.

If there are any questions, please contact Karnak’s Technical Service Department—1-800-526-4236, or fax requests to: 732-388-9422.
709 Karna-Klean

**DESCRIPTION:**
Karna-Klean is a biodegradable non-toxic petroleum free cleaner/degreaser with all natural ingredients. The base ingredient in this highly concentrated formulation is a natural solvent obtained from orange peel and pulp, giving Karna-Klean a pleasant scent of fresh oranges. Karna-Klean is an extremely versatile cleaner/degreaser capable of removing the toughest grease, tar, lubricants, adhesives and asphalt. Karna-Klean can be safely used to clean aluminum, stainless steel, chrome, concrete and most plastics and painted surfaces. Using Karna-Klean can reduce your costs especially if you are presently using products containing petroleum distillates, alcohol or other hazardous materials. Karna-Klean affords you the opportunity to utilize one product to clean and degrease your entire facility safely and effectively.

**APPLICATION:**
Spray onto affected area full strength and allow to penetrate a few minutes. Hose off completely with strong stream of water.

**SPECIFICATIONS:**
85-90% Limonene Solvent.

**PHYSICAL PROPERTIES:**
USES: Dissolves and removes asphalt, tar, grease and asphalt emulsions. **Cleans asphalt and tar from brick, cements, stucco, concrete and metal siding and all types of roofing equipment and vehicles.** Also cleans and removes ink, adhesives, oil and most paints, graphite, dirt and scale.

**Note:** Karna-Klean is a solvent. As a result, some staining may occur. Test a small area prior to use.

**CAUTION:**

**EYE IRRITANT. MAY CAUSE SKIN IRRITATION WITH PROLONGED CONTACT.**
Avoid contact with skin, eyes and clothing. Wear protective gloves when using this product. Avoid breathing of vapors or mists. Do not take internally.

**KEEP OUT OF REACH OF CHILDREN.** For Professional Use Only.
709 Karna-Klean

**COMBUSTIBLE LIQUID:** Keep away from heat, spark, open flames or other sources of ignition. Use only with adequate ventilation. Keep container upright to prevent leakage. Close nozzle after each use. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

**FIRST AID:**
EYE CONTACT: Flush with water for at least 15 minutes. If irritation persists, call a physician.

SKIN CONTACT: Wash thoroughly with water. If irritation persists, call a physician.

INGESTION: Immediately drink large quantities of water. Do not induce vomiting. Call Poison Control Center or physician immediately.

INHALATION: Remove to fresh air. Seek medical attention if victim is not responsive.

**PACKAGING:**
Available in 1 quart bottles (12 bottles per case).

**If further information is needed, contact Karnak Technical Services at 1-800-526-4236.**

Please see page 222 for additional mold and safety information.
**DESCRIPTION:**
799 Wash-N-Prep Roof Cleaner is a concentrated liquid TSP substitute product specifically designed to clean roof surfaces prior to applying coatings. Use to properly prepare metal, asphalt, concrete spray polyurethane foam, TPO, PVC and in general cleaning of exterior surfaces. Contain no phosphorous.

**USES:**
799 Wash-N-Prep Roof Cleaner is a concentrated liquid, pro-grade, all-purpose TSP substitute cleaner use to properly prepare metal, asphalt, concrete spray polyurethane foam, TPO, PVC and in general cleaning of exterior surfaces.

**DIRECTIONS:**
When using it is recommended to wear rubber gloves and safety glasses. Read label and MSDS before using. Do not breathe spray mists during application.

- Most roofs should be properly cleaned using a pressure washer. Add 799 Wash-N-Prep Roof Cleaner in full strength to the detergent reservoir or place pressure washer siphoning tube directly into container. Use for injector dilution ratios up to 16:1.
- For heavy duty cleaning of roofs without a pressure washer, add 16 ounces of 799 Wash-N-Prep Roof Cleaner per gallon of water. Apply to roof using a stiff nylon brush by dipping brush into the solution.
- For general cleaning add 8 ounces of 799 Wash-N-Prep Roof Cleaner per gallon of water. Apply using a stiff brush, mop or sponge. Wring out excess and wash surface from the bottom up.

Note: Rinse all surfaces with clean water to remove all residues and allow to completely dry before coating. Do not allow dirty solution to dry on windows as staining can occur. Spray windows with clean water prior to application and after. Runoff is not harmful to plants. Vegetation should be sprayed before and after application with a light mist of water to protect from burning.

**WARNING:**
**KEEP OUT OF REACH OF CHILDREN. CLOSE CONTAINER AFTER EACH USE. NEVER STORE IN UNLABELED CONTAINERS.**
Avoid contact with eyes and skin. May cause burns. If swallowed, drink a glass of water and call a physician. EYE CONTACT: Immediately flush thoroughly with plenty of water for at least 15 minutes and seek medical attention. SKIN: Wash thoroughly. If irritation develops and continues, see a physician. Do not mix with acids. Use only according to mixing directions on container.

**PACKAGING:** 1 Quart bottles
MOLD AND SAFETY NOTICES

MOLD NOTICE:
Moisture that exists in the building or that enters the building prior to or after the installation of Karnak products on the building may result in mold growth. We disclaim any and all liability and responsibility for damages to persons or property arising from or relating to the presence of mold in the building.

VENTILATION NOTICE:
Provide adequate ventilation and take necessary measures to prevent penetration of airborne solvents into the building structure.
Guide Specifications

Read Material Safety Data Sheets before using this product.

Application Temperature Recommendations

<table>
<thead>
<tr>
<th>PRODUCT TYPES &amp; PRODUCTS</th>
<th>Storage Temperatures (Store Indoors in dry environment)</th>
<th>Application Temperatures</th>
<th>Service (Performance) temperatures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premium Acrylics, 501, 535, 505, 404, 406, 407, 505 Karna-Flex WB</td>
<td>50 - 90F</td>
<td>40F and rising</td>
<td>-15F to 180F</td>
</tr>
<tr>
<td>Economy Grade Acrylics 529, 405</td>
<td>50 - 90F</td>
<td>40F and rising</td>
<td>15F to 180F</td>
</tr>
<tr>
<td>Silicone, 670 Karna-sil</td>
<td>50 - 90F</td>
<td>40F and rising</td>
<td>-15F to 180F</td>
</tr>
<tr>
<td>Aluminum, 27, 28, 97, 98, 169, 297</td>
<td>50 - 90F</td>
<td>40F and rising</td>
<td>15F to 180F</td>
</tr>
<tr>
<td>SBS, SEBS 502, 229, 502 Karna-Flex</td>
<td>50 - 90F</td>
<td>40F to 95F</td>
<td>-40F to 180F</td>
</tr>
<tr>
<td>89</td>
<td>50 - 90F</td>
<td>30F and rising</td>
<td>15F to 180F</td>
</tr>
<tr>
<td>Cements &amp; Flashings</td>
<td>50 - 90F</td>
<td>32F and rising</td>
<td>15F to 180F</td>
</tr>
<tr>
<td>Rubberized Mastic and Aluminum 229, 298</td>
<td>50 - 90F</td>
<td>40F and rising</td>
<td>-15F to 180F</td>
</tr>
<tr>
<td>Epoxy Primers</td>
<td>50 - 90F</td>
<td>40F and rising</td>
<td>-15F to 180F</td>
</tr>
<tr>
<td>Siloxanes, LL10, LL20</td>
<td>50 - 90F</td>
<td>40F and rising</td>
<td>-15F to 180F</td>
</tr>
</tbody>
</table>

*The substrate, the product and the ambient temperatures must be above minimum temperature.

**Application at temperatures lower than 40°F will become difficult, due to the increase in viscosity that occurs when the product’s temperature is lowered. Application of products at or below freezing temperatures could result in adhesive failure, unless special precautions are taken to insure that the surface is free of moisture and/or ice crystals.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.