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## INSTALLATION INSTRUCTIONS

### PCF-100

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#### READ BEFORE USING THIS PRODUCT

**GENERAL:** Crafco PCF-100 is a single component, hot applied, polymer modified, asphalt based product that is specially formulated to be used as bonding adhesive, primer and sealing mastic for geo-composite waterproofing membrane installations. PCF-100 is supplied in solid form, which when melted and properly applied bonds strongly to asphalt, concrete, wood or metal surfaces, and adheres to geocomposite membranes. PCF-100 can also be used as hot-applied sealing mastic at overlaps, edges, protrusions and terminations of fabric or film backed membrane waterproofing products. When melted and heated to proper temperature for the specific usage, PCF-100 is a low viscosity, free flowing, self-leveling product that is easily applied and leveled to the desired application rate, and which penetrates and bonds membrane fabrics. PCF-100 can also be used as a general purpose pavement crack or joint sealing product.

#### MELTING AND HEATING TEMPERATURES:

**Melting:** PCF-100 is removed from the box, with the plastic liner attached, and then melted in a jacketed double boiler melter with effective agitation that meets requirements of appendix X1.1 of ASTM D6690. Do not use direct fired or air heated machines. Heat transfer oil should not exceed 525°F (274°C). The unit must be capable of safely heating product to 400°F (204°C). CAUTION: Do not agitate when adding product due to splashing.

**Heating Temperatures:** The heating and installation temperature for PCF-100 is different for different uses as follows:

**Use as Bonding Adhesive, Primer or Pavement Crack/Joint Sealant:** For these uses, application temperatures of between 360 and 400 F (182-204 C) are used.

**Use as Geocomposite Membrane Sealing Mastic:** When used as sealing mastic for geocomposite membranes, minimum application temperature shall not be below 320F (160C), and the maximum temperature is based on the heat resistance of the specific membrane material. Generally, for membranes containing polypropylene fabrics, temperature should not exceed 350F (177C), and for membranes with polyester fabrics, temperature should not exceed 375F (191C). Contact the membrane supplier to verify specific temperature ranges to use. **Caution, when used as sealing mastic for geocomposite membranes, the proper application temperature for the membrane must be determined. If applied at higher temperatures that the membrane can withstand, membrane damage may occur.**

**APPLICATION LIFE:** Application life when heated is approximately 12 to 15 hours. This may be extended by adding fresh blocks as quantity in the melter decreases. Product should be agitated while being applied. Product may be reheated to application temperature once, after initial heat up. When application life has been exceeded, PCF-100 will begin to thicken, become “stringy” and may then gel. If this

occurs, product should immediately be removed from the melter and discarded.

**PAVEMENT TEMPERATURES:** Apply product when pavement temperature exceeds 40°F (4°C). Lower temperatures may result in reduced adhesion due to presence of moisture or ice. If pavement temperature is lower than 40°F (4°C), it may be warmed using a heat lance that puts no direct flame on the pavement. If using as bonding adhesive, primer, or pavement crack/ joint sealant, and installing at lower pavement temperatures than 40°F (4°C), extreme care should be used to insure that the pavement is dry and free from ice and other contaminants. Applied product should be checked by qualified personnel to assure that adhesion to the pavement is adequate.

#### INSTALLATION AS PRIMER OR BONDING ADHESIVE FOR GEOCOMPOSITE MEMBRANES

**Cleaning:** The surface should be swept or blown with clean moisture and oil free compressed air to remove dirt, dust, vegetation or other miscellaneous debris. Areas that are not adequately cleaned with sweeping or air may require scraping with shovels or other hand tools, followed by compressed air blowing. Surfaces with bonded accumulations may require more intensive cleaning procedures such as high pressure water blasting, wire brushing or abrasive cleaning. The cleaning procedure is to result in surfaces which are dry and free from dust, dirt or other contaminants. Additional cleaning procedures for several surfaces follow:

- ❑ **Portland Cement Concrete Surfaces** – New Portland cement concrete pavements usually are treated with curing agents and may be contaminated with form release oils. Curing compounds used should not contain silicone, oil or wax bases, as membrane adhesion may be affected. Form release agents should be a self-dissipating type. New PCC must be cured for at least 7 days. Abrasive cleaning or high pressure water blasting may be required for PCC to remove curing agents or form release compounds.
- ❑ **Wood Decks** – Wood decks are commonly treated with preservatives, which may even accumulate on the surface. Excess preservative is to be removed by scraping and cleaning with solvent such as mineral spirits. Wood decks must be cleaned down to the wood surface. Some preservative types may not be compatible with PCF-100 and may result in softening or adhesion loss.
- ❑ **Milled Asphalt Concrete Surfaces** – Milled asphalt concrete surfaces are highly textured and may have difficult to remove embedded fines and dust in the surface. Cleaning should use high pressure compressed air. If the surface texture contains vertical surfaces or the texture is over 1/4" (6mm) deep, an asphalt concrete leveling course should be placed prior to membrane installation.

**Application:** PCF-100 that is heated to the application temperature range of 360 to 400°F (182 - 204°C) is applied directly to the prepared, cleaned and dry pavement surface by pumping, pouring or spraying, and then leveled with a squeegee to the appropriate application rate for the pavement

surface and membrane product being installed. When used as a primer for self adhesive peel and stick type membranes, application rate should generally be 0.10 – 0.15 gsy (0.47 – 0.70 L/sm), and the membrane should be applied as soon as the PCF-100 has cooled.

PCF-100 is also used as a bonding adhesive for non-peel and stick type membranes. When used as bonding adhesive PCF-100 should be applied at the appropriate application rate for the pavement and membrane type (typically 0.15 to 0.20 gsy (0.70 – 0.93 L/sm)). The membrane should be immediately placed in the hot PCF-100 to achieve saturation of fabric layers and to establish appropriate adhesion.

For applications as primer or bonding adhesive, PCF-100 installation should be smooth, uniform and at the correct design application rate. There should not be bubbles, blisters or other defects in the surface of the installed PCF-100.

**CAUTION: Excessive application of PCF-100 can result in membrane slippage during subsequent paving operations.**

**INSTALLATION AS SEALING MASTIC:** PCF-100 is also used as sealing mastic for joints, edges, overlaps, protrusions and terminations or fabric or film backed membrane waterproofing systems. To install as sealing mastic, PCF-100 that is heated to the appropriate application temperature range for the specific geocomposite membrane product, is applied in approximately a 1/8 inch (3mm) thick band that is 1 – 2 inches (2.5 – 5cm) wide centered over the edge of the overlap. At edges, terminations, protrusions or other discontinuities in the membrane, PCF-100 should also be applied in a 1/8 inch (3mm) thick by 1 – 2 inch (2.5 – 5cm) wide bond, or as needed to seal.

**INSTALLATION AS PAVEMENT CRACK SEALANT:** Follow CrafcO Application Instructions for Hot Applied RoadSaver, Polyflex, Parking Lot and Asphalt Rubber Products.

**APPLICATION PRECAUTIONS:** The installed PCF-100 is hot right after application, and remains adhesive. All personnel in the area are to be aware of these characteristics, and should keep off the installed product. All pedestrians and vehicular traffic must be kept off of the installed PCF-100 until covered.

**CLEAN OUT:** If equipment used requires clean out, follow the manufacturer's instructions. If solvent is used, insure that it does not contaminate product because dilution and flash problems may occur.

**STORAGE:** Pallets of product are protected with a weather resistant covering. During storage, this covering must be intact to prevent boxes from getting wet. If wet, boxes may lose strength and crush. Rips in the pallet covering should be repaired to maintain packaging integrity. Pallets should be stored on a dry, level surface with good drainage. Pallets should not be stacked because crushing of bottom boxes may occur. Product properties are not affected by packaging deterioration.

**SAFETY PRECAUTIONS:** Since PCF-100 is heated to elevated temperatures, it is essential that operations be conducted safely. All personnel need to be aware of hazards of using hot applied materials and safety precautions. Before use, the crew should read and understand product use and safety information on the box and the product MSDS. User should check D.O.T. requirements for transportation of product at elevated temperatures above 212°F (100°C).

**HAZARDS ASSOCIATED WITH HOT APPLIED MATERIALS:** Skin contact with hot materials causes burns. Over exposure to fumes may cause respiratory tract irritation, nausea, or headaches. Precautions are to be taken to prevent contact with hot material and to avoid inhalation of fumes for everyone in the vicinity. Safety precautions should include:

1. Protective clothing to prevent skin contact with hot material.
2. Care when adding product to melters to reduce splashing.
  1. Careful operation of wands or pour pots used to apply product.
  2. Traffic and pedestrian control measures which meet or exceed local requirements to prevent access to work areas while product is in a molten state.
  3. Avoidance of material fumes.
  4. Proper application configurations with a minimum amount of material excess.
  5. Appropriate clean up of excessive applications or product spills.

**ADDITIONAL INFORMATION:** Additional information regarding this product is available by contacting your distributor or CrafcO, Inc. This information includes:

1. Product Data Sheets,
2. Material Safety Data Sheets,
3. Safety Manual