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## APPLICATION INSTRUCTIONS THERMOFIX TYPE 1, 2 AND 3

PART NO. 34291 (Type 1), 34292 (Type 2), 34293 (Type 3)  
JANUARY 2004

### READ BEFORE USING THIS PRODUCT

**GENERAL:** These application instructions pertain to Crafco ThermoFix Type 1, 2 and 3 products. ThermoFix products are hot-applied thermoplastic, self-leveling adhesive materials which are used to fill spalls and other voids in portland cement concrete pavements. To use, ThermoFix is removed from the container, heated to application temperature in an appropriate melter, applied to prepared pavement surfaces, and allowed to cool and solidify. ThermoFix forms a well bonded impact resistant, load bearing repair for the pavement. ThermoFix is supplied in three types for use in cold, moderate, and hot climates as indicated on the product data sheet.

**MELTING, HEATING AND AGITATING:** ThermoFix is supplied in solid form in self release containers. To use, the product is removed from the container, and material placed in an oil or air-jacketed melter with effective agitation, a pump application system and a heated application hose. Suggested melters are Crafco Supershot of LF150 units. The heat transfer medium should be heated to 450°F – 550°F (232°C – 288°C) during melting of the material. The melter applicator must be capable of safely heating ThermoFix to 425°F (218°C). After ThermoFix has melted sufficiently for the agitation system to turn, the agitator should be run continuously during heating and application, except for when adding new block of material. **CAUTION:** Do not agitate when adding new blocks of material because splashing of hot product may occur. ThermoFix is then heated to application temperature of 375°F – 425°F (190°C – 218°C) prior to applying to pavement. If the material temperature drops below 375°F (190°C) during application as additional blocks are added, application should stop until the correct application temperature range is once again reached.

**PAVEMENT TEMPERATURES:** Material should be applied when the surface temperature exceeds 40°F (4°C). Application at lower temperatures may result in reduced adhesion due to possible presence of excess moisture or ice in the work area. If the surface temperature is lower than 40°F (4°C), it may be warmed by appropriate methods to achieve the minimum required temperature. If conditions require that work be performed at lower surface temperatures than 40°F (4°C), extreme care should be used to insure that the work area is dry and free from ice and other contaminants. Material temperature should be maintained at the safe heating temperature. Applied material should be checked by qualified personnel to assure that adequate adhesion is developed.

**PAVEMENT CLEANING PROCEDURES:** Pavement voids which are to be filled with ThermoFix must be clean, intact and dry. The level of cleaning required is the same as for concrete pavement joint sealants. Standard cleaning methods that are appropriate include air blowing, sand blasting, wire brushing, and sawing. Sandblasting is recommended for optimum field performance.

**APPLICATION CONFIGURATIONS AND TECHNIQUES:** Heated ThermoFix at application

temperature should be applied to the sidewalls of the pavement void first, and then filled to within approximately 1/2 inch (13mm) of the desired surface level. After the initial layer has cooled, apply a second lift of ThermoFix level with the surrounding pavement. This procedure will reduce the percentage of material shrinkage when cooled. When applied, ThermoFix is self-adhesive and develops a strong bond to the desired work area. Shrinkage of approximately 10% will occur as ThermoFix cools from application temperature to ambient conditions. No compaction is required.

ThermoFix can be used to fill a variety of voids in concrete pavement ranging from small spalls and pop outs to larger spalled or deteriorated areas. The maximum size repair area that should be filled with ThermoFix is approximately 5 ft<sup>2</sup> (.5m<sup>2</sup>) and up to 6 in. (150mm) deep. Minimum material thickness shall be 3/8 in. (9mm). Since ThermoFix is a hot-applied material, it must be allowed to thoroughly cool prior to opening to vehicular or pedestrian traffic. Required cooling time varies depending on ambient temperature and application size. Generally allow approximately 30 - 60 minutes of cooling for each 1 in. (25mm) of material depth before opening to use.

**APPLICATION LIFE:** Application life at application temperatures is approximately 12 to 15 hours. Application life may be extended by adding fresh blocks of material as quantity in the melter decreases. The material should be agitated while being applied. The material may be reheated to application temperature once, after the initial heat up. Additional reheating of the material may result in degradation of properties

**PRECAUTIONS:** ThermoFix products may soften when subjected to concentrated fuel or oil spills. ThermoFix will, however, maintain field serviceability when subjected to intermittent fuel or oil exposure if spills are cleaned up promptly.

**STORAGE:** Pallets of boxed product are protected with a weather resistant covering. During storage, the protective wrap must be kept on the pallets to prevent boxes from getting wet. If boxes are subjected to moisture, they may lose strength and crush resulting in pallet leaning. If rips in the pallet covering occur during handling, they should be repaired to help maintain packaging integrity. Pallets should be stored on a level surface which is dry and has good drainage. Pallets should not be stacked because crushing of bottom layers may occur. Material properties are not affected by packaging deterioration.

**SAFETY PRECAUTIONS:** Since these materials are heated to elevated temperatures, it is essential that operations be conducted in manners which assure safety of personnel. All associated with use of the material need to be aware of the hazards of using hot applied materials and safety precautions. Before use, the crew should read and understand product use and safety information on each box of material and the product MSDS. This sheet which is supplied with each shipment,

describes the characteristics of the product as well as any potential health hazards and precautions for safe handling and use. User should check D.O.T. requirements for transportation of sealant at elevated temperatures (above 212°F ( 100°C)).

**HAZARDS ASSOCIATED WITH HOT APPLIED**

**MATERIALS:** Skin contact with hot applied materials causes burns. Over exposure to fumes may cause respiratory tract irritation, nausea, or headaches. Appropriate precautions need to be taken to prevent contact with the hot material and to avoid inhalation of fumes for everyone in the vicinity of the work area operation. Safety precautions should include: 1. protective clothing to prevent skin contact with hot material. 2. Care when adding product to melters to reduce splashing. 3. Careful operation and control of tools which are used to apply product. 4. Traffic and pedestrian control measures which meet or exceed local requirements to prevent access to work areas while product is still in a molten state. 5. Avoidance of material fumes. 6. Proper application configurations with a minimum amount of excesses of material. 7. Appropriate clean up of excessive applications or product spills.

**ADDITIONAL INFORMATION:** Additional information regarding these products is available by contacting your distributor or Crafc0, Inc. This information includes 1) Product Data Sheets, 2) Material Safety Data Sheets, 3) Safety Manual.