

**CRACKMASTER 3405 NR**

**SMT-318**

**REVISED 3/6/18**

**PRODUCT DESCRIPTION**

CrackMaster 3405 NR is a premium crack and joint sealant for portland cement and asphaltic pavements. As an economical and effective preventative maintenance treatment, CrackMaster 3405 NR prolongs pavement life by sealing cracks and joints from water penetration, which cause base failure and pot holes. CrackMaster 3405 NR is a hot applied, one part material that provides excellent results in cold weather and throughout repeated freeze/thaw cycles. CrackMaster 3405 NR offers high resiliency, ductility, and re-sistance to weathering. CrackMaster 3405 NR forms a long-lasting seal which resists tracking in warm temperatures and remains flexible in cold temperatures.

**USES**

CrackMaster 3405 NR is recommended for sealing cracks and joints in portland cement and asphaltic pavements. It is designed to seal expansion and contraction joints, longitudinal and trans-verse cracks, joints between concrete and asphaltic shoulders, and random cracks.

**COMPOSITION**

As supplied, CrackMaster 3405 NR is supplied in solid blocks comprised of asphaltic resins and synthetic polymer rubber.

**SIZES**

CrackMaster 3405 NR is supplied in 50 lb. cardboard cartons containing two 25 lb. blocks of material per carton.

**COLOR**

Black.

**LIMITATIONS**

Do not overheat material. Cracks must be free from moisture, dust, loose aggregate and other contaminates prior to application.

**SPECIFICATIONS**

CrackMaster 3405 NR meets the following specifications: ASTM D 3405, ASTM D 6690 Types 2 & 3, AASHTO M 301, AASHTO M 324 Types 2 & 3. Exceeds ASTM D 1190, ASTM D 6690 Type 1, AASHTO M 173, AASHTO M 324 Type 1, Fed. Spec. SS-S-164, SS-S-1401C, FAA P 605.

**TECHNICAL DATA**

CrackMaster 3405 NR meets the following material requirements when tested in accordance with ASTM D6690 Type I & II, ASTM D3405, and SS-S-1401C.

Chemical & Physical Analysis	
Recommended Pour Temperature	370-390°F
Maximum Heating Temperature	410°F
Heating Time	12 Hours Max.
Cone Penetration at 77°F	90 Max.
Resiliency	60%
Flow at 140°F (5h)	3 mm Max.
Bond: -20°F/50% Ext	Passes 3 days of cycles
Bond: 0°F/100% Ext	Passes 3 days of cycles
Softening Point	176 F Min
Specific Gravity	1.18 Approximately
Asphalt Compatibility	PASSES
Viscosity @ 375	30 poise Max.

**ENVIRONMENTAL CONSIDERATIONS**

CrackMaster 3405 NR is considered a non-hazardous material.

**INSTALLATION**

Proper surface preparation will facilitate adequate adhesion and consequently the maximum service life of the sealant. The crack must be free from moisture, dust, and loose aggregate. Routing or wire brushing are preferred methods followed by a compressed air heat lance immediately prior to sealing. The substrate and air temperature must be above 40°F.

**METHODS**

CrackMaster 3405 NR shall be melted in a conventional oil-jacketed unit equipped with an agitator and temperature control device for both material and heat transfer oil. Carefully insert blocks of material (with plastic bag) into melting equipment with agitator turned off. Load material slowly to avoid splashing. After the initial load of material has reached the recommended pouring temperature (370-390°F), fresh material may be added as sealant is used. Melt only enough material that will be used the same day. Avoid overheating material. Excessive heat could cause material to gel in the equipment or fail in crack and joints. A significant viscosity increase accompanied by stringiness signals the approach of gelation. If this occurs, immediately remove the material from the melter and dispose of it.

**IMPORTANT**

Protective apparel is recommended with application of CrackMaster 3405 NR. The extremely hot material will cause severe burns on contact with skin. OSHA Safety Regulations require workers to wear the following types of safety attire (see current OSHA/Safety Regulations for additional information): Hard hat with face shield; long sleeved shirt buttoned at the wrist; heat resistant gloves;

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long, cuffless pants; and safety toed work boots. Make certain all area around melter is clear of all debris and flammable materials. Avoid breathing vapors. Use with adequate ventilation.

## MIXING PROCEDURES

Use material as supplied. Do not blend with other materials. After CrackMaster 3405 NR is melted it should be agitated or recirculated.

## APPLICATION

Apply heated CrackMaster 3405 NR using either a pump and wand system or a pour pot. For best results the sealant depth to width ratio should not exceed 2 to 1 (i.e. 2-inches deep to 1-inch wide). The cooled sealant height should not exceed 1/8" above surrounding pavement. Using a sealing shoe or squeegee, band the material 2 to 3 inches wide over the crack.

## ESTIMATING MATERIAL REQUIREMENTS

Use the following chart as a guideline for estimating material requirements (based upon pounds of material needed for 100 feet of cracks):

Crack Width	Depth	Lbs/100 Ft
3/8"	3/8"	7.2 lbs.
3/8"	1/2"	9.6 lbs.
1/2"	1/2"	12.8 lbs.
1/2"	1"	25.6 lbs.
3/4"	1/2"	19.2 lbs.
3/4"	3/4"	28.8 lbs.

The above coverage rates are only a guideline. Actual material usage may vary due to width of application and thickness of material above pavement surfaces.

## PRECAUTIONS

Cracks must be free from moisture, dust, dirt, and debris. Both substrate and air temperature must be above 40°F. Keep boxes of material dry during storage. Do not store in direct sunlight.

## PACKAGING AND AVAILABILITY

CrackMaster 3405 NR is supplied in 32 lb. meltable units. Each pallet contains 64 containers or 2,048 pounds of CrackMaster 3405 NR.

## WARRANTY AND DISCLAIMER

The statements made on this technical data sheet are believed to be true and accurate and are intended to provide a guide for approved application practices. As workmanship, weather, construction, condition of pavement, tools utilized, and other variables affecting

results are all beyond our control, the manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. The manufacturer expressly disclaims any implied warranties of merchantability or fitness for a particular purpose.



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