

CONCRESlVE® 2070

Low vapor pressure (LVP) acrylic crack filler

DESCRIPTION:

CONCRESlVE® 2070 concrete crack filler is a low vapor pressure (LVP), low viscosity, high molecular weight (HMWM) acrylic monomer product. It is developed primarily to reconsolidate, fill and seal cracked concrete substrates.

RECOMMENDED FOR:

Gravity filling of cracks on bridge and parking garage decks

FEATURES/BENEFITS:

- Ultra low viscosity
- Superior penetration in topical applications

ESTIMATING:

CONCRESlVE 2070 concrete crack filler is packaged in 5 and 50 gallon (18.9 and 189 liter) units.

Coverage Rates

CONCRESlVE 2070 material will cover 100 to 150 ft²/gal (2.5 to 3.7 m²/L) depending on the volume of cracks and the porosity of the concrete.

PERFORMANCE DATA¹:

Form	Ultra low viscosity liquid
Color	Clear light amber
Pot Life, 100 g Mass	45 minutes
Thin Film Cure Time	Bulk 1 to 2 hours Surface 5 to 7 hours
Viscosity (ASTM D 2393)	18 cps
Density (ASTM D 1497)	8.9 lb/gal (1.07 kg/L)
Vapor Pressure (ASTM D 323)	<1 mm/Hg
Flash Point (ASTM D 3278)	>200 °F (>93 °C)
Volatile Content (ASTM D 3269)	25%
Tg (DSC Onset) (ASTM D 3418)	>90 °F (>32 °C)
Bond Strength to Concrete (ASTM D 323)	>1,500 psi (>10.3 MPa)

¹ Properties listed on this data sheet are typical and descriptive. Test and cure temperature of 77 °F (25 °C).

APPLICATION:

Surface Preparation Procedures

Concrete surfaces to which the CONCRESlVE 2070 crack filler is to be applied must be dry and free of dust, dirt, oil, wax, curing compounds, efflorescence, laitance and all other bond breaking materials. The recommended method of preparation is shotblasting or gritblasting.

MIXING:

Conversion of the CONCRESlVE 2070 crack filler from the liquid to the solid state requires the use of a promoter/initiator system. CONCRESlVE 2070 Promoter (cobalt naphthenate) and CONCRESlVE 2070 Initiator (cumene hydroperoxide) are packaged in premeasured kits which accompany each unit of product that is shipped.

The mixing sequence is as follows.

- Step 1. Add CONCRESlVE 2070 Promoter to the CONCRESlVE 2070 Monomer and mix thoroughly.
- Step 2. Add CONCRESlVE 2070 Initiator to the blend prepared in Step 1. Mix thoroughly.

WARNING: NEVER MIX CONCRESlVE 2070 PROMOTER WITH CONCRESlVE 2070 INITIATOR. WHEN BOTH PRODUCTS ARE MIXED TOGETHER THEY WILL REACT EXPLOSIVELY.

Small batches of CONCRESlVE 2070 material may be measured and mixed by volume. When mixing CONCRESlVE 2070 crack filler in less than full unit batches, use the formula recommended below to determine the correct volume of promoter and initiator that is required for the selected batch size.

Batch Size	CONCRESlVE 2070 Promoter	CONCRESlVE 2070 Initiator
1 gal (3.8 L)	1.2 fl oz (40 mL)	4.8 fl oz (160 mL)
5 gal (18.9 L)	6.0 fl oz (200 mL)	24.0 fl oz (800 mL)

Instructions for measuring CONCRESlVE 2070 Promoter and CONCRESlVE 2070 Initiator, respectively, are as follows.

- Using a 400 mL polypropylene beaker, measure the required amount of CONCRESlVE 2070 Promoter as shown in the table above. Add the CONCRESlVE 2070 Promoter to the CONCRESlVE 2070 Monomer and mix thoroughly.
- To preclude a violent reaction, the 400 mL beaker that is used to measure the CONCRESlVE 2070 Initiator must be completely free of any Promoter residue. Measure the required amount of CONCRESlVE 2070 Initiator as shown in the table above, and add this to the promoted CONCRESlVE 2070 Monomer. Mix thoroughly.

MIXING (CONTINUED):

Large batch sizes of CONCREATIVE 2070 material are more conveniently proportioned by weight. The recommended formula is:

Parts By Weight

CONCREATIVE 2070 Monomer	100.0
CONCREATIVE 2070 Promoter	1.0
CONCREATIVE 2070 Initiator	4.0

Placing

Begin application within 10 minutes following addition of the CONCREATIVE 2070 Initiator. Flood the area to be treated with promoted and initiated CONCREATIVE 2070 material at a rate of 100 to 150 ft²/gal (2.5 to 3.7 m²/L). Allow the material to penetrate for approximately 10 minutes. Remove or redistribute excess material with brooms or squeegees. Broadcast dry, bagged #12 mesh sand onto the treated surface at a rate of 0.25 to 0.30 lb/yd² (0.15 to 0.18 kg/m²). Allow the material to reach a tack free degree of cure before opening to traffic.

CLEAN UP:

Clean mixing equipment and application tools as soon and as often as practical with a suitable solvent such as acetone or MEK (both flammable), or 1, 1, 1, trichloroethane or methylene chloride (both nonflammable).

LIMITATIONS:

- Application temperature range (substrate) is 50 to 120 °F (10 to 49 °C).
- Minimum cure temperature is 50 °F (10 °C).
(The polymerization of high molecular weight monomers is subject to oxygen inhibition, i.e., material exposed to air is slow to cure. Material applied in a film thickness of approximately 5 mils (125 µm) or less is extremely susceptible to this phenomenon. In the absence of elevated substrate temperatures and/or direct sunlight, thin films may require in excess of 72 hours to become tack-free. Consequently, applications of this product on cool substrates, at night or in shaded areas should be undertaken only after careful consideration of temperature and sunlight factors, and probable time required to overcome the oxygen inhibition effect. Do not open treated areas to traffic until the surface is tack-free.)
- Shelf life of CONCREATIVE 2070 material is 18 months in original unopened container. The container must not be exposed to direct sunlight. Maximum storage temperature is 80 °F (27 °C).

SAFETY:

Any hazard associated with the use of this product can be significantly reduced by observing all precautions which are found on the product data sheet. Material Safety Data Sheets (MSDS), and the product labels. Please read this literature carefully before using this product.

This product may be irritating to the skin and eyes and may have lacrimatory (tear causing) effects. Use of barrier creams, protective clothing, solvent resistant gloves and boots and eye goggles is recommended. Concentrated vapors may cause dizziness and/or nausea. Provide adequate ventilation in indoor or confined outdoor areas.

The National Institute of Occupational Safety and Health (NIOSH) reported observations of some adverse effects that were experienced by workers who were exposed to air levels of cobalt at or below the current permissible OSHA limit. When CONCREATIVE 2070 Promoter is used properly the trace amount of cobalt salt present in the promoted product is under the permissible exposure guideline(s).

Health and safety materials and equipment appropriate to the application of CONCREATIVE 2070 material should be available prior to the use of this product.

For additional information, contact your local Master Builders representative.

Flammability

CONCREATIVE 2070 Monomer contains an acrylic monomer which is combustible (flash point [SFCC] >200 °F {93 °C}) and considered to have low flammability under normal ambient conditions.

RELATED BULLETINS:

Material Safety Data Sheet — CONCREATIVE 2070

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