



EpoxySystems' Product #684

Concrete Crack Welder and Penetrating Sealer

DESCRIPTION

PRODUCT #684 Concrete Crack Welder and Penetrating Sealer is a High-Molecular Weight Methacrylate, specifically formulated to seal new or hardened cracked concrete and masonry surfaces. **PRODUCT #684** is a three component, low viscosity, monomeric penetrating sealer, ideally suited to prevent water, chloride or other deleterious liquids from penetrating concrete. **PRODUCT #684** is used to seal new or existing concrete. **PRODUCT #684** is used to arrest concrete deterioration due to alkali silica reaction of portland cement concrete.

ADVANTAGES

- Extremely low viscosity gives excellent penetration.
- Excellent adhesion.
- Reduces water absorption and chloride ion intrusion in concrete.
- Easily applied by roller, brush or squeegee.
- Applicable by vacuum process or vacuum injection.
- Will cure at temperatures as low as 40° F (4.4° C).
- Non-flammable, high flash point.
- Low odor.

USE

PRODUCT #684 can be used on new or existing cracked concrete or other absorbent masonry materials to seal from water, chlorides and salt solutions such as; horizontal decks, slabs, parking garages, driveways, patios and other substrates exposed to pedestrian or vehicular traffic. **PRODUCT #684** can be used above and below grade on concrete, masonry surfaces, and horizontal surfaces. To prevent skidding, apply **PRODUCT #75 Filler** or other fine silica aggregate, immediately after **PRODUCT #684** is applied and while still tacky. If hardened, recoat with **PRODUCT #684** and apply **PRODUCT #75**.

COVERAGE

Approximately 100 square feet per gallon for crack sealing and 200 square feet for surface sealing. Coverage will vary, depending on porosity and surface of the substrate.

SURFACE PREPARATION

Surfaces must be clean, dry, free of oil, grease, dust, wax or other bond breaking material. Sandblasting is the preferred method of surface preparation.

MIXING

Mix the B Component initiator (white pasty liquid) packaged one (1) bottle per one (1) gallon of monomer. Mix thoroughly for three (3) minutes. Begin application immediately after addition of the B Component.

APPLICATION

PRODUCT #684 is applied to horizontal surfaces by squeegee, roller or brush. Spread material over area and allow to pond over cracks. Permit material to penetrate into cracks and substrate; remove excess material leaving no visible surface film. For cracks greater than 1/8" (3.2 mm) wide, fill crack with oven-dried fine sand before applying **PRODUCT #684**. Seal cracks with **Product #703 Trowel Grade Epoxy** from underside, when accessible, to prevent leakage. Recoating may be required on very porous surfaces. Apply second treatment before broadcasting sand. After treatment, wait at least (20) minutes at 72 °F (22.2 °C). Remove any loose sand and open to traffic.

PHYSICAL PROPERTIES

	<u>English</u>	<u>Metric</u>
Flash Point, ASTM D 93	190° F	87.8° C
Color	Clear Yellow Liquid	
Viscosity, ASTM D 445	25 cps.	
Gel Time (100 gram mass)	20 to 30 minutes @75 ° F	23.9° C
Compressive Strength, ASTM D 695		
1 hour	1,000 psi minimum	6.9 MPa
2 hours	3,000 psi minimum	20.7 MPa
24 hours	5,500 ± psi minimum	37.9 MPa
Tensile Strength, ASTM D 638		
1 day	750 psi min.	5.2 MPa
Tensile Elongation at Break	2.5% min.	2.5% min
Modulus of Elasticity	67,000 psi min.	462 MPa
Flexural Strength, ASTM D-790	6,600 psi min.	45.5 MPa
Tangent Modulus of Elasticity	169,000 psi min.	1165.2 MPa
Modulus of Rupture	5,000 psi min.	34.5 MPa
Bond Strength, ASTM C 882 Hardened to Hardened		
2 days	2,200 psi	1.5 MPa
Deflection Temperature, ASTM D-648 (0.01 inch)	140° F	60.0° C

PACKAGING

One (1) gallon (3.79 liter) can; five (5) gallons (18.93 liter). B Component and C Component are packaged in plastic containers each bottle is for one (1) gallon (3.79 Liter) of **PRODUCT #684**.

LIMITATIONS

Store at 45° F to 85° F (7.2° C to 29.4° C). Higher temperatures will reduce shelf life. Do not use below 10° F (-12.2° C). If crack is full-depth, material may run out; seal concrete slab from underneath with **Product #703 Trowel Grade Epoxy**. Do not thin **PRODUCT #684**. This product has a limited shelf life of 2 months.

CAUTION: WARNING! Contains acrylic monomers and organic peroxide. May cause skin sensitization or other allergic responses. Avoid inhalation of vapor. Wear protective clothing, goggles and/or barrier creams. In case of skin contact, wash thoroughly with soap and water. In case of contact with eyes, flush immediately with water and contact a physician.

**FOR INDUSTRIAL USE ONLY
KEEP AWAY FROM CHILDREN**

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