

Epoxy Grout for Severe Applications

Technical Bulletin # 616K

Product Description

CHOCKFAST Blue is a two-component, aggregate-filled, pourable epoxy grouting compound for severe applications. This highly developed material is often used to replace steel soleplates or rails and is used as an epoxy foundation capping material that is resistant to high operating temperatures. Its unique properties permit usage directly under highly stressed machinery mounting surfaces.

Use & Benefits

Typical applications include the grouting of diesel engines, compressors, generators, gears, pumps and most other heavy equipment. CHOCKFAST Blue is unexcelled under heavy reciprocating and rotary machinery due to its excellent resistance to creep, fatigue and shock forces. It is also an excellent support surface for the CHOCKFAST Black epoxy chock.

Design Considerations

CHOCKFAST Blue is normally used in a thickness range of 1" to 1-1/2" (25-38mm). Thicker sections can be constructed with CHOCKFAST BLUE if proper layering techniques are used. Please contact ITW Philadelphia Resins for additional application instructions.

Long pours should be divided into sections not exceeding 3'-6" (1.1m) in length. Longer, thicker or thinner pours are possible, but ITW Philadelphia Resins should be consulted before deciding upon them. The pourable viscosity of the CHOCKFAST BLUE provides for essentially 100% surface contact. Because CHOCKFAST BLUE has negligible shrinkage, final alignment may be set before grouting.

Application Instructions

For CHOCKFAST BLUE temperatures that will be between 120°-140°F (49°-60°C) during engine operation the static loading shall not normally exceed 500 psi (35 kg/cm²) which is perfectly practical for most machinery. Below 120°F (49°C), loads up to 2,000 psi (140 kg/cm²) are permissible, but 1,200 psi 85 (kg/cm²) should not be exceeded without reference to ITW Philadelphia Resins, who are always available for consultation on any application.

Precondition resin and hardener to 70°-80°F (21°-27°C) for 24 hours before mixing. The hardener should be added to the resin and power mixed until a homogeneous color and texture are apparent. Because the resin is aggregate-filled, heavy duty mixing equipment is required. Mixing for 3-5 minutes with a Kol mixer or a large Jiffy mixer blade in a 3/4" drilling machine is usually sufficient.

Physical Properties

COMPRESSIVE STRENGTH	19,000 psi (1336 kg/cm ²)	ASTM C-579 MOD
COMPRESSIVE MODULUS OF ELASTICITY	1,640,000 psi (115300 kg/cm ²)	ASTM C-579 MOD
LINEAR SHRINKAGE	0.0001 in./in. (0.0001 mm/mm)	ASTM D-2566
COEFFICIENT OF LINEAR THERMAL EXPANSION	15.4 X 10 ⁻⁶ /F° @ 32°F to 140°F (27.7 x 10 ⁻⁶ /C° @ 0°C to 60°C)	ASTM D-698
FLEXURAL STRENGTH	4,920 psi (345 kg/cm ²)	ASTM C-580
FLEXURAL MODULUS OF ELASTICITY	1.7 X 10 ⁶ psi (120300 kg/cm ²)	ASTM C-580
TENSILE STRENGTH	3,156 psi (225 kg/cm ²)	ASTM D-640
IZOD IMPACT STRENGTH	3.4 in.lbs./in. (0.15 Newton m/cm)	ASTM D-258
FIRE RESISTANCE	Self-extinguishing	ASTM D-637
SPECIFIC GRAVITY	2.0	

Product Information

COVERAGE	800 in. (³ 13.1 Liters)
APPLICATION TEMPERATURE	55°F (13°C) to 95°F (35°C)
UNIT PACKAGING	Resin (NH): 5 gal (18.9 L) in a 5 gal pail Hardener (NH): 0.34 gal (1.3 L) in ½ gal can Aggregate is premixed in the resin
UNIT WEIGHT	Resin: 55.5 lbs (25 kg) Hardener: 2.9 lbs (1.3 kg)
SHIPPING WEIGHT	62 lbs (28 kg)
CURE TIME (approximate)	36 hrs. @ 60°F (16°C) 24 hrs. @ 72°F (21°C) 16 hrs. @ 80°F (27°C) 11 hrs. @ 90°F (32°C)
POT LIFE	35-50 minutes @ 70°F (21°C)
CLEAN UP	IMPAX IXT-59 or other epoxy solvent
SHELF LIFE	Excess of 2 years in dry storage

Reference

For design considerations and application details please request Bulletin # 640 and #642 or contact ITW Philadelphia Resins' Engineering Services Department.

Date 06/2006

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