

SCB CONCRESlVE® 1370

Structural Concrete Bonding Process injection resin

DESCRIPTION:

SCB CONCRESlVE® 1370 is a two-component, solventless, low viscosity liquid epoxy adhesive for pressure injection grouting. SCB CONCRESlVE 1370 is intended for filling large voids in concrete, rock and wood, structures. Due to the slow cure rate, the product can be applied in a large mass without excessive build up of heat and the attendant high degree of shrinkage or possible decomposition. This product is also suitable for use in structures which are exposed to high levels of nuclear radiation. SCB CONCRESlVE 1370 was developed specifically for use with the Structural Concrete Bonding (SCB) Process and is available in the Americas only through Master Builders network of SCB Process Licensees.

RECOMMENDED FOR:

- Thick section grouting as in post tensioned slabs
- Filling voids in concrete structures
- Grouting voids pre-packed with aggregate to form machine bases or bearing pads
- Structurally re-bonding cracked concrete sections

FEATURES/BENEFITS:

- Slow cure for extended pumping time
- Can be injected in mass without excessive heat build up
- Resistant to high levels of nuclear radiation

PACKAGING/ESTIMATING:

SCB CONCRESlVE 1370 is packaged in 3, 15 and 150 gal (11.4, 57 and 568 L) units.

PERFORMANCE DATA¹:

Mix Ratio	by volume		2:1
	by weight		100:48
Form	Liquid		
	Part A	Part B	Mixed
Color	Straw	Green	Green
Density, lb/gal	9.5	9.2	9.4
Specific Gravity, g/ml	1.15	0.98	1.12
Viscosity, cps	500	400	500
Pot Life, hours			
60 gram	10		
1 qt (.9463 L)	5		
1 gal (3.78 L)	2		
Thin Film Tack Free Time, hours			>24
Full Cure Time, days			18

Properties of Cured Material²

Tensile Strength (ASTM D 638)	5,000 psi (34.5 MPa)
Elongation at Break, % (ASTM D 638)	2.0
Flexural Strength (ASTM D 790)	10,000 psi (69 MPa)
Flexural Modulus (ASTM D 790)	3.0 x 10 ⁵ psi
Compressive Strength (ASTM D 695)	8,000 psi (55.2 MPa)
Compressive Modulus (ASTM D 695)	1.5 x 10 ⁵ psi
Heat Deflection Temp. (ASTM D 648)	120 °F (49 °C)

Exotherm Temperature on Cure:

In void filling applications, it is essential that the maximum temperature which develops during cure remain moderate (100 to 120 °F) to minimize shrinkage after the gel state of the epoxy system has been reached. This condition can be met by providing a sufficient heat sink for fast reacting systems, the use of slowly reacting systems, or the employment of an adhesive system in combination with a sufficient amount of aggregate to minimize exotherm. Aggregate prepacking is often not possible, which leaves only the slowly reacting epoxy system as a practical solution to a void filling problem. SCB CONCRESlVE 1370 is such a system. In a one gallon mass, when surrounded by air, this product develops an exotherm of approximately 350 °F within three hours after mixing. The same mass surrounded by concrete show no appreciable exotherm because the heat released during polymerization is absorbed by the concrete environment.

Effect of Aggregate Extension:

The addition of aggregate to SCB CONCRESlVE 1370 will affect the mechanical properties of the cured system as shown below.

14 days @ 77 °F (25 °C), 3.5 volumes of sand

Compressive Yield Strength, 10,500 psi (72.5 MPa)
(ASTM D 695)

Compressive Modulus, 2.7 x 10⁵ psi
(ASTM D 695)

¹ The properties are typical and descriptive at 77 °F (25 °C).

² Cure time, 14 days; Test and cure temperature 77 °F (25 °C).

Nuclear Radiation Resistance:

SCB CONCRETSIVE 1370 is specifically designed for use in nuclear radiation environments.

APPLICATION:

SCB CONCRETSIVE 1370 Injection Resin and the SCB Process are available only through Master Builders SCB Process Licensees. Consult your local Master Builders Office for the licensed contractor near you.

LIMITATIONS:

- Application temperature range is 50 °F to 100 °F (10 °C to 38 °C).
- Minimum cure temperature is 35 °F (2 °C), however due to the increased viscosity, application below 50 °F (10 °C) may not be practical.
- Minimum cure time before functional use @ 77 °C (25 °C) is 14 days.
- Shelf life is 18 months (minimum) in sealed containers stored below 120 °F (49 °C). After 18 months, consult Master Builders or retest product to material specification.
- This product should be used by qualified personnel for recommended applications.
- The A and B components of SCB CONCRETSIVE 1370 contain chemical compounds which may cause allergic skin and respiratory reaction. Harmful if swallowed. Do not get into eyes, on skin or on clothing. Use only with adequate ventilation. Wash thoroughly after handling.
- The use of barrier creams such as Kerodex No. 71 or Indco Labs No. 211, 213, or 214 is recommended. Clean latex rubber gloves or disposable polyethylene gloves should always be worn. Should skin contact occur, wash immediately with soap and cold water, Epocleanse 6001, or other suitable hand cleaners.

RELATED BULLETINS:

SCB CONCRETSIVE 1370 – Material Safety Data Sheet
Master Builders Specification Bulletins 6S1 and 6S3

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