TECHNICAL DATA SHEET

SeaShield 530™ Injectable Epoxy

Extra Low Viscosity Structural Injection Epoxy

Description

SeaShield 530 Injectable Epoxy is an extra low viscosity injection epoxy. It is a 2-component 100% solids epoxy, for injection of concrete cracks/voids and is formulated to produce low exotherm and structural stability in such applications.

Uses

- Repair of concrete cracks and voids
- Filler for larger voids
- Underwater injection projects

Features

- Solvent-free and non-shrink
- Meets the requirements of ASTM C881/C882
- Low viscosity allows for superb penetration of substrate resulting in excellent adhesion
- 135 cps. viscosity allows for penetration of small hairline cracks
- Resistant to oils, salts, and mild chemicals
- Easy and convenient mix ratio
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- High mechanical strength
- Low water absorption
- Can be applied underwater without de-watering
- Moisture tolerant, can be used on dry, damp, or underwater surfaces

Surface Prep

Surface should be clean, sound, and free of all contaminants that could impact product adhesion and/or performance. New concrete should be a minimum of 28 days old prior to application. SeaShield 525 Epoxy and SeaShield 526 Epoxy can be used to seal the crack and the injection devices. The devices used may be plastic tees or ports depending on the technique used. If using ports (spaced every 6" to 12" / 150 mm to 300 mm), it is necessary to use a vacuum drill to make the holes for the injection ports. The placing of the injection devices is critical. Foreign material in a crack may be a major factor in the success of injection. If needed, flush cracks to remove contaminants. Ensure all foreign matter has been removed from the crack and surrounding area.Part A (base) & Part B (hardener). Add the hardener to the base and mix at a slow speed until a constant color is achieved making sure all sides of the container are scraped.

Mixing

To achieve optimal performance, condition the 530 Injectable Epoxy to 70°F prior to mixing. Mix each component separately prior to use. Proportion Components to a 2-parts A to 1-part B ratio by volume into mixing equipment. Ensure product is uniformly mixed prior to injection.

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Application

SeaShield 530 Injectable Epoxy is designed for use with a pressure pot or other single component pump.

1. After the crack has been prepared for the pressure injection process, resin is pumped from one port (or tee) to the next in sequence. On a vertical crack, one starts at the bottom. If there is water in the crack it must be expelled by the resin being injected and this phase must continue until clear, water-free resin is emerging from the next port (or tee).

2. The injection process must be continuous until the entire crack is filled with resin.

3. Test samples of the resin shall be taken before, during and after the injection is complete. It is imperative that the injection process be continually monitored to ensure that the resin injected is properly mixed and will cure satisfactorily.

Note: When using a pressure pot, pour contents of “B” into “A” and mix well with a low speed power mixer (200 - 300 rpm) until one even color develops. Pour mixed material into the pressure pot.

Storage

Store in a dry, well-ventilated area between 40˚F and 105˚F (4-41˚C) in original, unopened containers. Shelf life is at least 24 months under these conditions.

Cleaning

Tools can be cleaned with solvents such as MEK, Xylene or Toluene before a full cure has been achieved. Once the product is cured, the material will need to be removed mechanically.

HSE

Wear protective clothing and ensure adequate ventilation. Avoid contact with skin and eyes. See Safety data sheet for further information.

Packaging

Kit Size	Part A	Part B
3 gallons (11.35 liters) kit	2 ea. - 1 gallon (3.78 liters) can	1 ea. - 1 gallon (3.78 liters) can

Technical Data

Properties	Values	
Peak Exotherm vs. Typical Epoxy Injection Resin		
Cylinder (2.5" x 3" / 63.5 mm x 76.2 mm) HT		
SeaShield 530	91°F *(-33°C)*	
Typical Epoxy	91°F*(-33°C)*	
Box (6" x 12" x 3" / 150 mm x 300 mm x 75 mm)		
SeaShield 530	163°F *(73°C)* in 140 mins.	
Box (6" x 6" x 3" / 150 mm x 150 mm x 75 mm)		
SeaShield 530	378°F *(192°C)* in 60 mins.	
Pot Life (Pressure Pot) @ 80°F (27°C)		
SeaShield 530, 1 Gallon (3.8 liters) Sample	Practical working time: 45 mins.	
Minimum Application Temperature	SeaShield 530 Injection Epoxy cures at temperatures down to 40°F *(4°C)*.	
Moisture Sensitivity	SeaShield 530 Injection Epoxy has excellent damp adhesion and water displacement capabilities.	
Peak Exotherm vs. Typical Epoxy Injection Resin		
Compressive Strength	**7 Days**	**28 Days**
Dry	77.9 MPa	97.5 MPa
Tremmied Under Water	77.9 MPa	97.5 MPa
Slant/Shear Adhesion	ASTM C881/C882 exceeds requirements of this specification on wet surfaces at 41°F (5°C).	
Mixed Material @ 80°F (27°C)		
Specific Gravity	1.62	
Viscosity	135 cps	
Color	Amber	
Solids by Weight	100%	
Mixing Ratio (A/B) by Weight	2 parts Base (A):1 part Hardener (B)	
Cure Schedule		
Pot Life 200 g.@ 77°F (25°C)	100 minutes	
Tack-free time @ 50°F/77°F (10°C/25°C)	22/11 Hours	
Through cure @ 50°F/77°F (10°C/25°C)	66/33 Hours	

Note: *Cure time is considerably longer at colder temperatures.*

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