

Solvent Base Epoxy Resin, Injecting at Reinforced Concrete Crack Lines, Honey Combs and Sealing Void Gap with Increase of Loading Bearing for Structures

Product Description: **Epo Inject Kit** is very low-viscosity epoxy resin grout based on bisphenol-A & containing a reactive diluents. Its two component epoxy resin grout system designed specifically for pressure injection. The low-viscosity resin is also excellent for injecting repair of cracks by gravity feeling. When applied with standard injection equipment of with the Packer, it will effectively grout and seal cracks in horizontal, vertical and overhead surfaces.

Application: Combined with aliphatic and/or cycloaliphatic amines for formulation injecting, good penetration properties system.

Properties: Imparts very low viscosity and long pot life, making injecting system easily workable, and good adhesion to concrete and sandblasted steel. The cured films show below:

- ❖ Good resistance to aliphatic and aromatic hydrocarbons
- ❖ Very good flow mechanical properties following optimal cure
- ❖ Good colour and very good penetration into concrete stability
- ❖ Good resistance to aqueous neutral and alkaline solutions
- ❖ Limited resistance to acids

Mechanical Performance of Properties

Compressive Strength	25°C	[N/mm2]	85 (± 3)
Tensile Strength	25°C	[N/mm2]	38 (± 3)
Elongation at Break	25°C	[%]	1.10
Bond Strength	25°C	[N/mm2]	< 5.50
Flexural Strength	25°C	[N/mm2]	41 (± 3)
Traffic Cured	25°C	[hour]	> 3
Bonding cured	25°C	[hour]	> 2
Viscosity	25°C	[mPas]	550 (± 75)
Abrasion Resistance		[mg]	225
Modulus of Elasticity		[N/mm2]	25000
Service Temperature		[°C]	- 05 °C until Max. 60 °C
Application Temperature		[°C]	Min. 10 °C until Max. 38 °C

Mixing Viscosity	Bonding Strength To Concrete/after 7 days at 25° C		
Temperature	68 °F	Dry Concrete	1,200 psi (100% concrete cracks)
Viscosity	75 cps	Wet Concrete	870 psi (100% concrete cracks)

Surface Preparation

1. Surface to be repaired or sealed must be clean and sound. Concrete must be free of dust, laitence, sealers, grease and other bond inhibiting contaminants.
2. Drilling of cracks for injecting packer tool ports must be accomplished with vacuum attached swivel drill chuck (no drilling necessary with BISC System).
3. Entry packer tools insert the ports for injecting should be approved devices spaced at appropriate intervals to accomplish the full penetration of the resin grout.
4. Can be using electrical high pressure air-less pump or hand pump to fixing on injection hose pipe with packer connector by connected to packer tool.

Mixing:

Supplied as two-component system. Mix materials with low speed drill and paddle for approximately Two - Four (2 - 4) minutes. Insure a thorough mix. Never mix more material than can be used in thirty (30) minutes. Do not apply Epoxy Inject Kit when ambient or surface temperatures are below 50 °F

Pacing:

6.00 kg pack or 3.00 kg pack or 1.00 kg pack

Coverage:

4.00 – 4.40 meter/kg, for <0.50 mm Crack lines
 2.50 – 2.75 meter/kg, for <0.80 mm Crack lines
 1.60 – 1.80 meter/kg, for >1.20 mm Crack lines
 1.25 – 1.45 meter/kg, for >1.50 mm Crack lines

Physical Properties of Epo Inject Kit

Key data of Resin	Specified key data
Aspect (visual)	Liquid
Colour (Gardner. ISO 4630)	≤ 3
Epoxy Index (ISO 3001)	6.2 – 6.5 [eq/kg]
Epoxy equivalent (ISO 3001)	154 – 161 [g/eq]
Viscosity at 25° C (ISO 9371B)	680 – 760 [mPa s]
Density at 25° C (ISO 1675)	1.10 – 1.15 [g/cm ³]
Flash point (ISO 2719)	> 142 [°C]
As-supplied form	Liquid
Odour	Slight
Shelf life (storage between 2 – 40 °C)	Several years
Hazardous decomposition products	Carbon monoxide, carbon dioxide (when disposed of in fire) and other toxic gases & vapours
Disposal	Regular procedures approved by Local authorities

Viscosity	(ISO 9371B) of Resin Grout as a function of temperature				
Temperature	[°C]	10	25	30	40
Viscosity at 25° C	[mPas]	850	250	120	60

Mix Ratio Components	Parts by weight
Epoxy Inject Kit Resin	100
Epoxy Inject Kit Hardener	50
Viscosity at 25° C [mPa s]	550
Gel time [min]	90
(Tecam, 100ml, 20° C, 65% RH)	

Key data of Hardener	Specified key data
Aspect (visual)	Colour liquid
Colour (Gardener, ISO 4630)	≤ 4
Amine value (DIN 16945)	12.40-12.70 [eq/kg]
Refractive Index at 25° C (DIN 51423)	1.4625-1.4645
Viscosity at 25° C (ISO 9371B)	≤ 210 [mPas]
H active equivalent weight	40 [g]
Density at 25 ° C (ISO 1675)	0.87 [g/cm ³]
Flash point (ISO 2719)	> 108 [°C]
As-supplied form	Liquid
Odour	Ammoniacal
Shelf life (storage between 2 – 40 °C)	Several years Hazardous decomposition products Carbon monoxide, carbon dioxide (when disposed of in fire) and other toxic gases & vapours
Disposal	Regular procedures approved by Local authorities



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