



# POLY-POXY

## EPOXY INJECTION RESIN

### DESCRIPTION

**POLY-POXY** is two components Epoxy injection system, low viscosity epoxy resin provides a high bond and compressive strength for sealing of fine cracks and repairing of cracked concrete to restore the structural strength to its original complete monolithic conditions. **POLY-POXY** is supplied in two bulk containers for use together with two components injection machine or pressure grout pump. Since the epoxy reacts within a certain gel time by itself, it is also recommended to use specialized epoxy injection gear to meet the specific material properties.

### AREAS OF APPLICATION

- Floor Slabs
- Repairs of cracks, static cracks
- Suspended Floors
- Bridges, Columns, Basements
- Grouting of bolts, anchors, bars etc.,
- Re-bonding of de-lamination in concrete toppings, tiles, etc., thus avoiding other costly replacement of methods.
- Jointing of concrete members.
- Consolidation of friable rocks and stones.

### ADVANTAGES

- ✓ Deep penetration into very small cracks
- ✓ Material easy mixing & convenient mixing ratio
- ✓ Applicable even to moist-wet concrete substrates
- ✓ Will not create new cracks
- ✓ Non-toxic
- ✓ Shrinkage free hardening
- ✓ High mechanical and adhesive strength

### TECHNICAL & PHYSICAL DATA

Form	Liquid
Color	Transparent
Mixing Ratio	By Weight - A:B = 2: 1 By Volume- A:B = 2: 1
Density	1.10 kg per liter
Mixed Viscosity (Pas)	Approximately at 20°C : 1000pcs Approximately at 30°C : 740pcs
Pot life	At 20°C approximately 60 minutes At 30°C approximately 35 minutes At 40°C approximately 18 minutes
Cure Time at 20 °C - 25°C	Initial : Minimum 24 hours at 20 °C Final: 3- 5days at normal temperatures
Limits	Min admissible substrate temperature 18 °C Max admissible substrate temperature 43 °C Max crack width approximate 3mm Min crack with 0.1mm (approximate)
Adhesive Strength	At 20°C, 65%RH, 10days Concrete :3.5 N/mm <sup>2</sup> (concrete failure) Steel: 15 N/mm <sup>2</sup> (steel sandblasted)
Tensile Strength (ASTM C 307)	27 N/mm <sup>2</sup>
Compressive Strength (BS 6319) Tensile Strength in Flexure (Din 1164) Peel Strength (Din 53282)	60-80 N/mm <sup>2</sup> 30-50 N/mm <sup>2</sup> 4 – 7 N/mm <sup>2</sup>
Water Absorption (Din 53475)	20 mg

## PACKAGING

Steel barrel /Standard Packing 12kg/Set

Resin (Part A) : 8 kg

Hardener (Part B) : 4 kg

## APPLICATION GUIDLINES

Providing the cracks to be injected are not too fine, blow then out with compressed air to remove all dust. Make sure the compressed air is free from oil and water.

After the cracks have been cleaned, bond flanged injection nipples into the surface with adhesive. Ensure that the nipples are not blocked with the adhesive used. Dry all wet surfaces before applying the adhesive.

The recommended distance between any two injection points should be between 20cm to 50cm depending on the thickness of concrete structure. Place the injection nipple into the concrete surface that was cracked all the way through.

Seal the cracked surface between the injection nipples with adhesive. Cracks through the entire thickness of concrete structure should be sealed on the both.

## INJECTION METHOD

1. Make sure that the cracks are still free from dust, etc., preferably by blowing through all the nipples in succession with compressed air. During this operation, all the nipples should be closed off except the one through which the compressed air is being blown and the adjacent to it.
2. Inject the well mixed **POLY-POXY** system into the crack. In the case of vertical crack, start injection at the lowest nipple and continue until the injection material begins to flow out of the next higher nipple. Then close off the first nipple and continue injection at the second until the material flows out of the third. Repeat this process until the whole length of the cracks has been injected. Use a gridding wheel to remove the sealing compound and nipples once the injected system has cured.

## POLYCELL TECHNICAL DEPARTMENT

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## SHELF LIFE

Min 12 months in its original unopened containers

## STORAGE CONDITION

Stored in a cold dry place

## MAINTENANCE OF MACHINERY & TOOLS

Tools and equipment should be cleaned with solvent immediately after used.

## HEALTH & SAFETY

**POLY-POXY** contains liquid epoxy resin and a polyamine compound. Irritating to eyes, skin and respiratory system. Do not breathe in the fumes. Wear suitable/protective gloves and eye/face protection at all time when handling materials and high pressure machine. Wash hand with plenty of water thoroughly with soap after used. Keep away from children. Harmful if taken internally.

Seek immediate medical advice in case of material comes in contact of eyes or swallow. Make sure proper ventilation at work site is adequate.

# POLY EPOXY GEL



## EPOXY ADHESIVE

### DESCRIPTION

**POLY-EPOXY GEL** is a high performance two part epoxy adhesive.

- Superior mechanical strength
- Thermal resistant
- Seal concrete cracks
- Water resistance
- Gaps filling and excellent bonding strength to wood, concrete, fiberglass, glass, ceramic, marble, metal, many plastics and other surfaces Water resistance
- New concept for maintenance for industrial & household application
- Extensively used in marine-timber and fiber boat manufacturing & maintenance
- Special formulate for Wood working and Construction industries

### TECHNICAL DATA

Part A	Epoxy Binder (white colour)
Part B	Hardener (amber colour)
Viscosity	Paste
Mix Ratio A:B (By Volume)	2 : 1
Pot Life (TECAM) 250gm @ 20°C	30 minutes
Cure Time @ 20 - 25°C	24 hours
Specific Gravity	1.1 – 1.2 g/cm <sup>3</sup>

### PHYSICAL PROPERTIES

TENSILE SHEAR STRENGTH (DIN 53283)

<u>Material</u>	<u>Hardening</u>	<u>Test Temperature</u>	<u>N/mm<sup>2</sup></u>
Steel	4 hours	20°C	12
Steel	8 hours	20°C	26
Steel	24 hours	20°C	32

PEEL STRENGTH (DIN 53282)

<u>Material</u>	<u>Hardening</u>	<u>Test Temperature</u>	<u>N/mm<sup>2</sup></u>
Steel, Pickled	24 hours	20°C	6-10

### SURFACE PREPARATION

All surfaces should be dried, cleaned and free from all contaminants.

## APPLICATION GUIDELINES

Mix thoroughly until even colour and homogenous mixture is achieved

Tools : Spatula, Putty Knife or Trowel, Brush, Roller & Cartridge Dispensing System are suitable

NOTE :

**DO NOT mix more than 500gm** at a time as the pot life will be shortened, caused by generation of Exothermal.

To speed up the curing time, heat up the assembly after application.

### Cleaning

Clean all equipment immediately after used

### Thinner

**Do not add thinner or water to the mixture.**

### PACKING

METAL Can 500gms 1 kg /set and 3 kg

### STORAGE

6 months when stored in a well-sealed original container.

### HEALTH & SAFETY

**POLY EPOXY GEL** contains epoxy resins. Handle with care & use disposable rubber gloves during works. Wash hands thoroughly with soap and water after use. Keep away from children. Harmful if taken internally.



**POLY-EPOXY GEL : Product Image**



**POLY-EPOXY GEL : Finished Product (Mixture)**

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Technical Data Sheet

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