MITCH EPO LV

Low Viscosity Epoxy Injection

DESCRIPTION

MITCH EPO LV, is a low viscosity epoxy injection compound for concrete cracks. It is a two part epoxy resin based product which contains no solvents resulting in high strength after curing.

Complies with ASTM C 881-78 Type I, Grade 1 Class B+C.

ADVANTAGES

- High mechanical strengths
- Strong adhesion
- Solvent free
- Very low viscosity for injection
- Non shrinkage at curing
- Epoxy based
- Suitable for dry and damp (SSD) conditions
- Easy to use
- Supplied in pre-weighed units
- Can be used at low temperatures

USES

Being good epoxy injection material it can be used for filling cracks and voids in concrete structure of following nature.

- Concrete bridge beams and columns.
- Concrete foundations.
- Concrete super structures.
- Concrete walls.
- Concrete water retaining structures.

Suitable for commercial, industrial and residential buildings as well.

TYPICAL PROPERTIES

PROPERTIES OF WET MATERIAL	
Mixing ratio	2 base : 1 activator by volume or mass
Density	1.1 kg/L (mixed)
Color : Base Activator Mixed material	 Clear Brownish Yellowish -brownish
Dilution	Not to be diluted
Consistency	Very low viscos

PROPERTIES DURING APPLICATION	
Application by	Injection hand and/or mechanical pumps
Pot life	20 – 30 min / 2kg @ 30ºC
Volume solids	100%
Yield / Consumption	1 kg is approximately equal to 1L
Curing time @ 25º C	Touch dry : 2 hours Practical cure : 12 hours Full cure : 7 days
Application temp. range	+10º C to +40 º C
Substrate Temperature	+5ºC to +30ºC
Substrate Minimum age	3-4 weeks
Maximum crack size	10 mm

PROPERTIES OF CURED MATERIALS	
Compressive strength @ 25º C	54 N/mm^2 after 7 days
Tensile strength @ 25º C	39 N/mm^2 after 7 days
Flexural strength @ 25º C	60 N/mm^2 after 7 days
Bond strength to concrete	4 N/mm^2 (Concrete Failure)
Bond strength to steel	12 N/mm^2
Water resistance	Excellent
Coefficient of thermal expansion	89 x10^{-6} per ºC

METHOD OF APPLICATION

SURFACE PREPARATION

The substrate must be sound, firm and clean, free of oil, grease, loose particles and cement laitance, old layers of paint, or other contaminants.

The cracks must be cleaned by using compressed air prior to injection. Seal the surface of the cracks with **MITCH EPO PUTTY 1**. Fix the injection nozzles at the intervals from 6 inches to 12 inches at the angle of 90º to crack by using 6-8 mm bit size drill machine. The hole should be 1 inch deep into cracks. If the crack is exposed to the both side of concrete, seal the crack with **MITCH EPO PUTTY 1** on the both sides. In this case fix the injection nozzles at the 45º to cracks by using 6-8 mm bit sized drill machine. The holes must cross the cracks.
After sealing the cracks and fixing nozzles leave for 24 hours for curing.

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MIXING AND PREPARATION

It is recommended that before application, **MITCH EPO LV** should be stored under cover and protected from extremes of temperatures which may cause inconsistent workability and cure times for the mixed material. Ideally, at least 24 hours before mixing, **MITCH EPO LV** should be maintained at approximately 20°C. During application in cold conditions, correct conditioning can help, but application should be halted if the ambient temperature is likely to fall below 10°C. Consideration should be given to the substrate or base slab as it is likely to be considerably colder than the surrounding air temperature. When temperatures exceed 30°C during application, working times may be reduced by as much as 50%.

In order to mix **MITCH EPO LV** mechanically one need a good drill machine with torque control and a mixing paddle attachment.

At slow speed of electric drill pour the hardener (Part B) into the base pack (Part A) and mix for approximately 2 minutes or until a uniform consistency and color is gained.

APPLICATION

Mixed **MITCH EPO LV** should be injected through the fixed nozzles. Start the day job from the bottom nozzle. Keep injecting till it comes from the next upper nozzle. Lock the filled nozzle and move to next upper nozzle. After 24 hours of injection process.

EQUIPMENT CLEANING

Immediately clean the tools with **MITCH CLEANER 1** after use.

PACKAGING

5 Kg set

SHELF LIFE

Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment.
Shelf life is 24 months when stored as above.

SAFETY

Gloves should be worn at all times and care must be taken not to ingest any of the material by eating or smoking while working with the compound.

If working in a confined space, provide adequate ventilation.

Use a little of **MITCH CLEANER 1** liquid to remove any splashes on the skin. Wash finally with soap and warm water.

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