

**NIPPOJECT EP LV** (formerly known as Nippon Crackjet EP)

*Updated Nov'22*
**DESCRIPTION**

**NippoJECT EP LV** is a two-component solvent free, low viscosity, non-shrinkage epoxy injection resin system that forms a permanent bond and seal the cracks in concrete and masonry, and for restoring structural integrity. After it is fully cured, NIPPOJECT EP LV is resistant to water and wide range of chemicals. **NippoJECT EP LV** is formulated for used in tropical climate and designed to be injected into the cracks using suitable injection equipment and tools. **NippoJECT EP LV** is also used for plate bonding application such as bonding of steel plate to reinforced concrete structures.

**USES**

**NippoJECT EP LV** is suitable for seal and bond cracks in concrete and masonry before waterproofing and flooring work. Crack widths between 0.20mm and 9mm can be treated.

**ADVANTAGES**

- Very low viscosity to provide deep penetration into fine cracks
- Excellent adhesion to substrates such as concrete, brick and masonry
- Suitable for structural and non-structural repair
- Non-shrinkage, adheres with no loss of bond
- Resistant to wide range of chemicals
- Minimum creep under sustained load

Product Type	Product	Pack Size	Finishing	Substrate
Crack Injection Material	<b>NippoJECT EP LV</b>	Part A: 3.5kg Part B: 1.5 kg	Amber	Concrete, brick, masonry, steel

**Typical Technical Data**

Form	: Liquid
Color	: Amber
Viscosity at 25°C, cps	: 119
Density, g/ml	: 1.055
Gelling Time (in 100g), minutes	: 40
Setting Time, minutes	: 45
Compressive Strength, MPa	: 77 MPa
Flexural Strength, MPa	: > 24 MPa
Water Absorption (after cured), %	: 0%
Shrinkage test	: Pass, no shrinkage
Soil Resistance	: Pass
Resistance to Chemicals	: Pass
Shelf Life	: Up to 12 months in original tight sealed container stored at dry cool place
Reaction to fire	: Will not ignite

**Application Method**
**Substrate Preparation**

1. Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae.
2. Blow the cracks and treated surfaces with oil free air to ensure complete removal of all dust and loose particles. Ensure that surfaces are blown dry.
3. In the presence of running water, please use **NippoJECT PU GEL 1K**.

**Injection method for both vertical and horizontal area**

1. Inspect the cracks and voids of the structure and plan the best injection proposal based on placement of packers and its distance and directions

2. Drill holes into the affected area.  
The injection packers inserted into pre-drilled holes shall be fixed at intervals along the length of each crack. The distance between each packer will depend upon the width and depth of the crack. Spacing shall be close enough to ensure that the resin will penetrate along the crack to the next point of injection. This will normally be between 200mm and 500mm.
3. The surface of the cracks between the packers shall be sealed with recommended epoxy mortar 30 to 40 mm wide and 2 to 3 mm thick. Both sides of any cracks which go all the way through a wall or slab shall be sealed this way. In the case of a wall or slab cracked all the way through, packers shall be located on both sides with those at the back placed at midway points between those at the front.
4. The epoxy mortar shall be allowed to cure for 8 hours at 35°C. The applicator shall ensure that the surface sealant has adequately cured prior to continuing.
5. One end of the injection hose shall be attached to the lowest packer on vertical cracks or to either end of horizontal cracks. Each crack shall be treated in a single, continuous operation. Sufficient material shall, therefore, be made ready prior to the commencement of the work.
6. Remove the packers, make good any holes or voids with recommended epoxy mortar and allow to cure.

**Non-injection method for horizontal area**

1. The crack should be weed out to a reservoir to facilitate penetration by the **NippoJECT EP LV** system applied to horizontal areas. Material penetration into the crack using this method will not be as deep as that achieved by injection.
2. Alternatively, **the epoxy mortar** can be placed along both sides of the crack to provide reservoir capacity. This minimizes wastage.

**Application**

1. The injection pressure should be at least 0.4N/mm<sup>2</sup> (4 bar)
2. Shake the material before use
3. Thoroughly mix the entire hardener and base resin contents until homogeneous clear
4. Only mix sufficient resin that can be used within the pot life of the material.
5. Allow to cure for 24 hours and shall be left undisturbed.

**Limitation**

- **NippoJECT EP LV** can only be used on dry or damp concrete or masonry.
- **NippoJECT EP LV** should not be used on live cracks where further movement is expected.
- **NippoJECT EP LV** should not be used in the presence of running water. **NippoJECT PU GEL 1K** should be used in this condition

**Environmental Conditions During Application**

- Apply temperature: 15-35°C. Do not apply when the surface to be coated is less than 3°C above the dew point.
- The humidity for application is 30-80%.

**Storage and Transportation**

A 12-month shelf-life can be expected from the date of manufacturing if recommended storage condition is respected.

**Cleaning**

Clean up equipment or tools with thinner immediately after use. Once cured, it can be removed with mechanical method. Allow the waste to cure, seal it into a suitable container and bury in landfill accordance to local authorities for disposing.

**Safety Precautions**

- Keep container tightly closed and keep out of reach children or away from food and drink.
- When applying, it is advisable to wear eye protection.
- Dispose off any waste in accordance with the appropriate Environment Quality Regulations.

**Note**

The above information is given to the best of our knowledge based on laboratory tests and practical experience. However, since we cannot anticipate or control the many conditions under which our products may be used, we can only guarantee the quality of the product itself. We reserve the right to alter the given without prior notice.