

NIPPON CRACKJET EP
Updated July'17
Description:

Nippon Crackjet EP 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, **Nippon Crackjet EP** is resistant to water and wide range of chemicals. **Nippon Crackjet EP** is formulated for used in tropical climate and designed to be injected into the cracks using suitable injection equipment and tools. **Nippon Crackjet EP** is also used for plate bonding application such as bonding of steel plate to reinforced concrete structures.

Uses:

Nippon Crackjet EP 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 Grade	Packsize	Finishing	Substrate
Crack Injection Material	Nippon Crackjet EP	5kg	Amber	Concrete, brick, masonry, steel

Typical Technical Data

Form	: Liquid
Color	: Amber
Viscosity at 25°C	: 119 cps
Density	: 1.055 g/ml
Gelling Time (in 100g)	: 40 sec
Setting Time	: 45 sec
Compressive Strength	: 77 MPa
Flextural Strength	: > 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 **Nippon Crackjet Gel**.

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.
3. 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.

4. The surface of the cracks between the packers shall be sealed with a band of **Nippon Epoxy Mortar FC** 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.
5. The epoxy mortar FC 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.
6. 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.
7. Remove the packers, make good any holes or voids with **Nippon Epoxy Mortar FC** and allow to cure.

Non-injection method for horizontal area

1. The crack should be veed out to a reservoir to facilitate penetration by the **Nippon Crackjet EP** 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, **Nippon Epoxy Mortar FC** can be placed along both sides of the crack to provide reservoir capacity. This minimises wastage.

Application

1. The injection pressure should be at least 0.4N/mm² (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

Nippon Crackjet EP can only be used on dry or damp concrete or masonry

Nippon Crackjet EP should not be used on live cracks where further movement is expected.

Nippon Crackjet EP should not be used in the presence of running water. **Nippon Crackjet Gel** should be used in this condition.

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 **Nippon Crackjet Cleaner** 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.