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MAPEI®

Epojet™ NA

High-Modulus, Low-Viscosity, Epoxy Injection Resin for Crack Repair

DESCRIPTION

Epojet is a high-strength, two-component, 100%-solids, low-viscosity, epoxy resin for pressure injection and sealing of cracks in structural concrete, masonry and wood.

FEATURES AND BENEFITS

- High-early-strength structural adhesive at normal and low ambient temperatures
- Comes in a dual cartridge for easy use
- Can be extended with aggregate to become an epoxy mortar
- High bond strength
- Fast-turnaround epoxy injection
- Moisture-tolerant
- Improves concrete surface by reducing water and chloride intrusion
- Excellent chemical resistance

INDUSTRY STANDARDS AND APPROVALS

- ASTM: Meets ASTM C881, Types I, II and IV, and Grade 1, Class C (except gel time)
- AASHTO M235: Meets specifications
- USDA: Meets specifications for food-processing areas

WHERE TO USE

- **For professional use only**
- Use on interior/exterior horizontal, overhead and vertical surfaces.
- Use for the pressure injection of cracks in structural concrete, masonry and wood.
- Use to repair cracks in horizontal concrete and masonry by gravity feed.
- Use to restore and seal horizontal concrete slabs, and to improve their wearability.
- Use to repair delaminated surfaces.
- Use as an epoxy resin binder for epoxy mortar patching.

SUITABLE SUBSTRATES

- Properly prepared concrete (at least 28 days old, stable and free of standing water) as well as masonry and wood

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

- Reference ACI RAP-2, Crack Repair by Gravity Feed with Resin, and ACI 503.7-07, Specification for Crack Repair by Epoxy Injection.
- Thoroughly clean the mouth of each crack, removing any substance that could interfere with the bond of the installation material, including dirt, paint, tar, asphalt, wax, oil, grease, curing compounds, laitance, foreign substances and adhesive residue.
- Remove debris by brush or vacuum, or blow the surface clean with oil-free compressed air.

- It is generally not recommended to flush cracks. Moisture residue may impede subsequent epoxy injection.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

- Acclimate material to between 65°F and 85°F (18°C and 29°C) before using.
- Pre-filled cartridges require application with a nozzle and gun to ensure adequate mixing of Part A and Part B.
- For the 3-U.S.-gal. (11.4-L) kit, use automatic injection equipment that will maintain the correct mixing ratio of 2 to 1 for Parts A and B while under pressure.
- The 3-U.S.-gal. (11.4-L) kit also may be mixed by combining Part A (2 U.S. gals. [7.57 L]) and Part B (1 U.S. gal. [3.79 L]) into a separate, clean mixing container. Mix with a low-speed drill (at 400 to 600 rpm) and Jiffy mixer until blended uniformly. Ensure that a ratio of 2 to 1 (A to B) is maintained.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

For pressure injection of cracks

1. Place injection ports where the crack is open. Use *Planibond® AE* to place ports and cap-seal the surface of cracks, typically a day before injection. Ensure that ports are not blocked by epoxy.
2. If feasible on suspended slabs, seal the underside of the crack with *Planibond AE* as well.
3. Space apart the ports no less than the thickness of the structure being repaired. Increase port spacing accordingly for complete injection penetration if the width at the crack surface is larger than at the bottom of the crack. Additionally, closer spacing may be suitable for injection of very fine cracks, or spacing may be varied slightly in locations where the crack opens and/or where the crack geometry changes.
4. Allow the cap seal to fully cure (time is dependent on temperature).

5a. Application using dual cartridge: Remove the cap from the cartridge, place a flow restrictor and attach the supplied static mixer. Dispense a small amount of *Epojet* to ensure that material is exiting the static mixer or automatic mixer fully blended (with no streaks).

5b. Application using kit: Pour directly neat from mixed units into the cracks.

6. Place the mixer or pump nozzle into the lowest injection port. If the back side of the crack has been sealed, stay on a port as long as it accepts epoxy. Cap adjoining ports as epoxy extrudes from them, staying on the original port until the pump stalls out or the crack is completely filled.
7. If the pump stalls out, cap the port and continue at the last port where epoxy extruded.

For gravity-feed crack repair

1. If the cracks reflect through the substrate, seal the underside.
2. Cracks should be V-shaped to allow material access and create head pressure for adequate penetration.
3. Apply *Epojet* from the cartridge or pour directly neat from properly mixed kit components into the crack. Continue placement until the crack is completely filled.
4. Lightly sand-broadcast the surface of the exposed epoxy.

For a binder in an epoxy mortar or patch

1. Set aside some neat resin for priming the patch area.
2. Prime the concrete with the neat resin so that the surface wets out.
3. Prepare the patch or mortar material by adding graded, oven-dried silica sand (typically 4 to 5 parts of aggregate per 1 part of epoxy) to the mixed epoxy resin while mixing with a slow-speed Jiffy mixer. Be careful not to trap air. Place the prepared mortar while the primed area is still tacky. Finish the patch with a trowel. Additional aggregate may be broadcast on the surface to provide slip resistance, and to protect from ultraviolet light (which will darken the epoxy). Do not disturb the patch until it is fully cured.

CLEANUP

Using an appropriate solvent, clean equipment before *Epojet* cures to a hardened state. Cured material can only be removed mechanically.

LIMITATIONS

- Maintain ambient and substrate temperatures between 40°F and 95°F (4°C and 35°C) during application.
- Application temperature of the substrate must be at least 5°F (2.8°C) above the dew point.
- No additional ingredients are required. Do not thin with solvents.
- Do not use in moving joints, or for sealing slabs on grade.
- Once cured, *Epojet* is a vapor barrier.
- Not designed to inject cracks wider than 1/4" (6 mm) or under hydrostatic pressure
- Do not apply if rain is imminent.

Product Performance Properties

Laboratory Tests	Results
Viscosity – ASTM D2393	410 cps
Gel time (60 g mass) – ASTM C881	30 minutes
Bond strength, 2-day cure – ASTM C882	1,320 psi (9.10 MPa)
Bond strength, 14-day cure – ASTM C882	2,754 psi (19.0 MPa)
Absorption – ASTM D570	0.93%
Heat deflection temperature – ASTM D648	147°F (64°C)
Compressive strength – ASTM D695	12,180 psi (84 MPa)
Compressive modulus – ASTM D695	547,100 psi (3 773 MPa)
Tensile strength – ASTM D638	7,510 psi (51.8 MPa)
Elongation at break – ASTM D638	3.3%

CSI Division Classifications

Maintenance of Concrete	03 01 00
Epoxy Crack Injection Grouting	03 64 23

Shelf Life and Application Properties

Shelf life	2 years in original, unopened container. Store at 40°F to 95°F (4°C to 35°C).
Gel time	30 minutes at 73°F (23°C)

Packaging

Size/Color
Dual cartridge: 13.5 U.S. oz. (399 mL)
Kit: 3 U.S. gals. (11.4 L) Part A: 2 U.S. gals. (7.57 L), clear Part B: 1 U.S. gal. (3.79 L), amber

Coverage per 1 U.S. gal. (3.79 L) of mixed epoxy

Yield
231 cu. in. (0.0038 m^3) of epoxy

Epojet™

Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI meets the health and well-being requirements of product certification programs, contact the MAPEI Sustainability Team at 1-800-992-6273.

We proudly support the following industry organizations:

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For the most current BEST-BACKED℠ product data and warranty information, visit www.mapei.com.