MAPEI

Epojet LV

Extremely fluid two-component epoxy resin for injection

WHERE TO USE

- Monolithic sealing of cracks.
- Bonding steel plates to concrete (*béton plaqué*) by low pressure injection.

Some application examples

- Structural repair of beams, pillars and cracked floors by low pressure injection.
- Reinforcement of beams and floors by injection with the *béton plaqué* technique, when the plates to be bonded are fitted with lateral flaps and it is therefore impossible to apply **Adesilex PG1** or **Adesilex PG2**.
- Repair of architectural concrete, wall coverings and architectural details that are friable.
- Structural consolidation and restoration of civil and industrial road constructions and underground works that show signs of microcracking.
- Sealing of cracks in cementitious screeds.
- Restoration, by injection, of concrete structures damaged by earthquakes, settlements or impacts.

TECHNICAL CHARACTERISTICS

Epojet LV is a two-component epoxy adhesive. The pre-measured parts (Part A = resin and Part B = hardener) must be mixed together before being used.

Once mixed, **Epojet LV** becomes a very fluid liquid that can easily penetrate even in microcracks.

Epojet LV polymerizes without shrinkage and once hardened is waterproof and resists chemical agents present in the atmosphere.

Epojet LV has very good insulating properties and a high mechanical strength.

RECOMMENDATIONS

- Do not use **Epojet LV** at temperatures below +5°C.
- Do not apply **Epojet LV** on wet surfaces.
- Do not apply **Epojet LV** on dusty, friable or weak substrates.
- Do not use **Epojet LV** for sealing expansion joints.

APPLICATION PROCEDURE

Preparing the substrate

Before injecting **Epojet LV**, the concrete surface must be perfectly solid and clean.

Positioning the steel reinforcement and injection

Clean all traces of rust or oil from the reinforcements by sandblasting to bright metal (SA 2 1/2).
Once these preparation procedures have been completed, securely fix the steel plates to the

Epojet LV

concrete with expanding bolts. Position the injectors in the space between the structure and the plate reinforcements and seal with **Adesilex PG1** or **Adesilex PG2**. The latter product has a longer pot life. After **Adesilex PG1** or **Adesilex PG2** has hardened, inject **Epojet LV** through the injectors.

Sealing cracks by injection

Make a series of holes of approximately 8-9 mm in diameter on the sides of the cracks and direct so they intercept the same cracks. Blow out the cavities with compressed air to remove all the dust formed during the drilling. Insert the appropriate injection tubes in the holes and seal the entire working surface with **Adesilex PG1** or **Adesilex PG2**.
If the holes cannot be formed because of lack of space, use flat head injection tubes directly onto the same cracks, fixing them to the concrete with expanding bolts or seal directly with **Adesilex PG1** or **Adesilex PG2**.
Wait until the **Adesilex PG1** or **Adesilex PG2** has hardened (at least 12 hours) then inject compressed air to make sure that the injection system is completely free.

Preparing the product

The two parts of **Epojet LV** must be mixed together. Pour Part B into Part A and mix by hand using a trowel (for small amounts), or with a low speed heavy duty drill (for large quantities), avoiding the formation of air bubbles, until the mix is completely homogeneous.
Do not use partial quantities of the parts as this may produce an imbalance in the proportions which could lead to incomplete hardening of **Epojet LV**. If partial quantities are required use an electronic precision balance.

Applying the product

Inject **Epojet LV** immediately after its preparation with a suitable pump, starting from the lowest tube. Inject until the resin overflows out of the next tube. Close the lower tube and continue injecting until the entire crack is completely sealed.
Horizontal cracks can be sealed simply by pouring **Epojet LV** directly into the crack.
At +23°C **Epojet LV** must be used within 70 minutes of its preparation. Avoid using **Epojet LV** when the exterior temperature and that of the substrate is less than +5°C.

Precautions to be observed during preparation and application

Epojet LV may cause irritation to the skin. It is recommended to wear protective gloves and goggles during preparation and application of the product.
When the product is applied in closed or poorly ventilated areas, provide good ventilation. In case of contact with the eyes, wash with plenty of water and consult a doctor.

SAFETY INSTRUCTION FOR THE PREPARATION AND APPLICATION

Epojet LV Part A is an irritant when in direct contact with eyes and skin. Part B contains a strongly caustic and harmful substance. In the consequence of repeated or prolonged contact, sensitivity could occur. Avoid contact with eyes and skin. In case of contact with the skin, wash with plenty of soap and water and, if any symptoms of sensitivity should occur, consult a doctor. In case of contact with the eyes, wash with clean running water and consult a doctor. Use in a ventilated area. Part A is dangerous to aquatic organisms. Avoid release to the environment.

Cleaning

Due to the strong adhesion of **Epojet LV**, it is recommended to clean working equipment with a solvent (ethyl alcohol, toluene etc.) before the product dries.

Consumption

– Sealing cracks:
1.1 kg/l of cavity to be filled.

– Bonding concrete-steel:
1.1 kg/m^2 per mm of thickness.

PACKAGING

2.5 and 4 kg units.

STORAGE

Store the product in original packaging in an area with a temperature **not** below +10°C.

FOR PROFESSIONALS.

WARNING

N.B. - Although the technical details and recommendations contained in this product report correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical applications: for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application: in every case, the user alone is fully responsible for any consequences deriving from the use of the product.

All relevant references of the product are available upon request

TECHNICAL DATA (typical values)

PRODUCT IDENTITY		
	Part A	**Part B**
Consistency:	liquid	liquid
Colour:	transparent yellow	transparent yellow
Specific gravity (kg/dm³):	1.1	1.1
Brookfield viscosity (mPa·s):	300 (shaft 2 - revs. 20)	25 (shaft 1 - revs. 50)
Storage:	24 months in original packaging at temperatures between +10°C and +35°C	
Hazard classification according to EC 99/45:	irritant, dangerous for the environment	corrosive
	Before using refer to the “Safety instructions for the preparation and application” paragraph and the information on the packaging and on the safety data sheet	
Customs class:	3907 30 00	

APPLICATION DATA	
Mix ratio:	Part A : Part B = 4 : 1
Consistency of mix:	extremely fluid liquid
Specific gravity of mix (kg/dm³):	1.1
Brookfield viscosity (mPa·s):	140 (shaft 1 - revs. 20)
Pot life: **– (at +23°C):** **– (at +30°C):**	 70’ 30’
Setting time: **– (at +23°C):** **– (at +30°C):**	 7-8 h 5-6 h
Application temperature range:	from +10°C to +35°C
Time required to harden completely:	7 days

FINAL PERFORMANCES (after 7 days)	
Bonding to concrete (MPa):	3.5 (concrete failure)
Compressive strength (MPa):	70
Flexural strength (MPa):	20
Modulus of elasticity in compression (MPa):	1100
Modulus of elasticity in flexion (MPa):	1800

Epojet LV

(GB) A.G. BETA

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