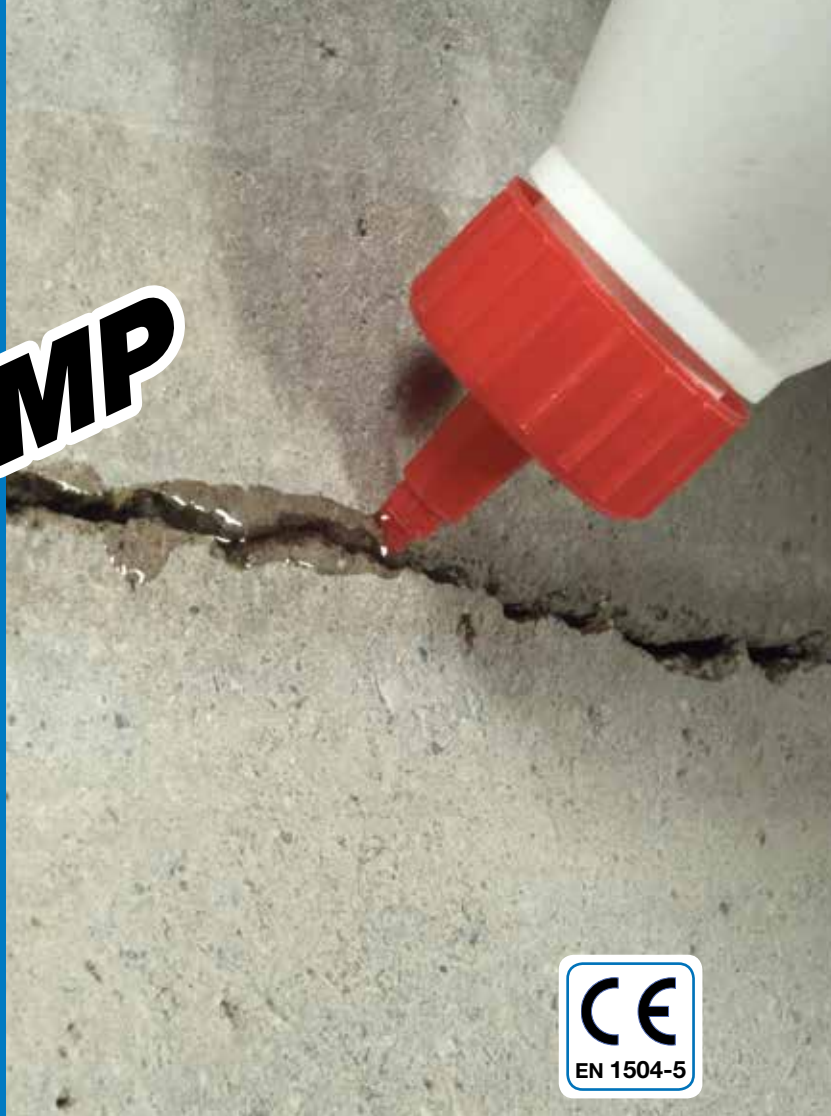




# Mapepoxy BI-IMP

## Two-component low viscosity epoxy resin for injection



### AREA OF USE

- bonding delamination in floorslabs and screeds;
- sealing and bonding of cracks in concrete floors;
- sealing cracks.

### TECHNICAL CHARACTERISTICS

**Mapepoxy BI-IMP** is a two-component solvent free epoxy adhesive. The components A (Resin) and Component B (hardener) must be mixed before using the product.

**Mapepoxy BI-IMP** has a very high capillary activity due to its unique formulation, and adheres perfectly to concrete and steel.

**Mapepoxy BI-IMP** has high mechanical strength and has a very good ability to maintain adhesion to concrete also in damp condition.

**Mapepoxy BI-IMP** polymerizes without shrinkage and once hardened is waterproof.

**Mapepoxy BI-IMP** complies with the principles defined in EN 1504-9 standard (*"Products and systems for protecting and repairing concrete structures. Definitions, requirements, quality control and conformity assessment. General principles for the use and application of systems"*), and the requirements of EN 1504-5 *"Concrete injection"*.

### CLASSIFICATION OF INJECTION PRODUCTS

Injection products are classified according to the

products corresponding to the performance requirements using the UW classification system (U:intended use, W:workability):

F: Injection product for force transmitting filling of cracks  
F1: Adhesion by tensile bond strength  $> 2 \text{ N/mm}^2$   
F2: Adhesion by tensile bond strength  $> 0.6 \text{ N/mm}^2$

D: Injection product for ductile filling of cracks  
D1: Watertight at  $2 \times 10^5 \text{ Pa}$

S: Injection product for swelling fitted filling of cracks.  
S1: Watertight at  $2 \times 10^5 \text{ Pa}$

The letter W for workability is followed by 3 or 4 groups of numbers between brackets.

first group: allowed minimum thickness of crack measured in tenths of millimeter.

second group: moisture state of the crack

- 1 - dry
- 2 - damp
- 3 - wet
- 4 - water flowing

third group: minimum and maximum use temperature.

fourth group: applicable only to F.

-1: usable for cracks subject to daily movement higher than 10% or 0.03 mm during curing.

-0: usable for cracks subject to daily movement lower than 10% or 0.03 mm during curing.

## TECHNICAL DATA (typical values)

PRODUCT DETAILS	Component A	Component B	
<b>Color:</b>	transparent	transparent	
<b>Appearance:</b>	liquid	liquid	
<b>Density (g/cm<sup>3</sup>):</b>	1.150	0.92	
APPLICATION DATA (AT 23°C - 50% R.H)			
<b>Mixing ratio:</b>	component A: component B = 7:3		
<b>Color of mixture:</b>	transparent		
<b>Consistency of the mixture:</b>	liquid /fluid		
<b>Density of the mixture (kg/m<sup>3</sup>):</b>	approx. 1 050		
<b>Brookfield viscosity of the mixture (mPa*s):</b>	approx. 110		
<b>Application temperature range:</b>	+5°C - 30°C (+21°C - 30°C for concrete injection)		
<b>Final hardening time:</b>	7 days		
<b>Potlife (EN ISO 9514-1000 ml): - at + 21 °C</b>	30 min		
FINAL PROPERTIES (7 days at + 23°C and 50 % R.H)			
<b>Compressive Strength (EN 12190):</b>	approx. 65 N/mm <sup>2</sup>		
<b>Modulus of elasticity (EN 13412):</b>	approx. 2.2 GPa		
Performance characteristics for product	Test methods	Requirements according to EN 1504-5	Product performance
<b>Classification according to EN 1505-5:2013</b>	U(F1) W(1)(1/2/3/4) (5/30)(0)		
<b>Adhesion by tensile bond strength:</b>	EN 12618-2	F1: ≥ 3.0 N/mm <sup>2</sup> (2.5 N/mm <sup>2</sup> ) F2: ≥ 2.0 N/mm <sup>2</sup> (1.5 N/mm <sup>2</sup> )	F1: > 3.0 N/mm <sup>2</sup> (cohesive failure in the substrate)
<b>Non volatile matter:</b>	EN ISO 3215	> 95%	99.29 %
<b>Injectability into dry medium - crack widths 0.1 mm – 0.2 mm – 0.3 mm:</b>	EN 1771	Class 1: < 4 min for crack width 0.1 mm Class 2: < 8 min for crack width 0.2 mm Class 3: < 12 min for crack width 0.3 mm. Splitting test: > 7 N/mm <sup>2</sup>	Crack width 0.1 mm Class 1: < 4 min, Splitting test: 12.3 N/mm <sup>2</sup>
<b>Injectability into non dry medium - crack widths 0.1 mm – 0.2 mm – 0.3 mm:</b>	EN 1771	Class 1: < 4 min for crack width 0.1 mm Class 2: < 8 min for crack width 0.2 mm Class 3: < 12 min for crack width 0.3 mm. Splitting test: > 7 N/mm <sup>2</sup>	Class 1: < 2 min, Splitting 10.1 N/mm <sup>2</sup>

Performance characteristics for product	Test methods	Requirements according to EN 1504-5	Product performance
<b>Tensile strength development for polymers:</b>	EN 1543	Tensile strength > 3 N/mm <sup>2</sup> within 72 hours at the minimum use temperature, or within 10 h at the minimum use temperature by daily crack movements higher than 10% or 0.03 mm (the lowest value has to be taken account)	Tensile strength > 3 N/mm <sup>2</sup> at 72 hours at + 20 °C
<b>Adhesion by tensile bond strength after thermal and wet-drying cycles:</b>	EN12618-2	F1: ≥ 3.0 N/mm <sup>2</sup> (2.5 N/mm <sup>2</sup> ) F2: ≥ 2.0 N/mm <sup>2</sup> (1.5 N/mm <sup>2</sup> )	Meets requirements F1: > 3.0 N/mm <sup>2</sup> (cohesive failure in concrete)
<b>Compatibility with concrete:</b>	EN12618-2	F1: ≥ 3.0 N/mm <sup>2</sup> (2.5 N/mm <sup>2</sup> ) F2: ≥ 2.0 N/mm <sup>2</sup> (1.5 N/mm <sup>2</sup> )	Meets requirements F1: > 3.0 N/mm <sup>2</sup> (cohesive failure in concrete)

**Mapepoxy BI-IMP** is classified as U(F1) W(1) (1/2/3/4) (5/30)(0) Identifies that the product is:

- > For force transmitting filling of cracks
- > Injectable in cracks of 0.1 mm dry, damp, wet and waterflowing
- > Fit for use from 5°C to 30°C
- > Usable for cracks subject to daily movement lower than 10% or 0.03 mm during curing.

### APPLICATION PROCEDURE

#### Preparation of the substrate

**Mapepoxy BI-IMP** is poured out on top of the crack and will penetrate into the concrete, repeat the operation until the crack is filled up. Sand 0.4-0.8 can be sprinkled on top of the crack. The sand will be transported into the crack with the epoxy and make a perfect body. When the crack is completely filled up remove excess material with a steel spatula. Repairing delamination in floors; drill several holes in the actual area and start filling **Mapepoxy BI-IMP** from one side. Soft knocking on the top gives a good control of the progress.

#### CLEANING

Tools and equipment must be cleaned immediately after use with **Spesialtynner**, ethanol or other cleaning agent suited for epoxy. Once hardened the product can only be removed mechanically.

#### CONSUMPTION

Approx. 1 kg/litre mixed material.

#### PACKAGING

1 kg set:  
Component A = 0.7 kg,  
Component B = 0.3 kg.

#### STORAGE

Properties for use are not changed for a period of 24 months when stored between + 5°C and + 30 °C in unopened original packaging.

**Mapepoxy BI-IMP** complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47

### SAFETY INSTRUCTIONS FOR PREPARATION AND USE

**Mapepoxy BI-IMP** part A is irritating to eyes and skin. It may cause sensitisation in contact with the skin. When applying the product, it is recommended to wear protective clothing, gloves and safety goggles.

**Mapepoxy BI-IMP** part B is corrosive and may cause severe burns. It is also harmful if swallowed. It may cause sensitisation by skin contact. When applying the product we recommend wearing protective clothing, gloves, safety goggles, suitable respiratory protection and to work only in well ventilated areas. If the product comes in contact with the eyes or the skin wash immediately with plenty of water and seek medical attention.

**Mapepoxy BI-IMP** part A and B is hazardous to aquatic life. Avoid release to the environment.

For further and complete information about safe use of the product please refer to the latest version of the safety data sheet.

PRODUCT FOR PROFESSIONAL USE!

#### NOTE

*Although the technical details and recommendations contained in this product data sheet 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 application: 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.*

**Please refer to the current version of the technical data sheet, available from our website [www.mapei.com](http://www.mapei.com)**

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**

**Mapepoxy  
BI-IMP**



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**02.02.2015 GB**