



# MAXEPOX<sup>®</sup>

## INJECTION



### LOW VISCOSITY EPOXY FORMULATION FOR INJECTIONS



#### DESCRIPTION

**MAXEPOX<sup>®</sup> INJECTION** is a two-component, solvent-free, 100 % solids, epoxy formulation with very low viscosity suitable for pouring or pressure-injection of cracks and fissures.

#### APPLICATION FIELDS

- Injection of non-active fissures and cracks in structural concrete repairs; beams, slabs, pillars, columns, etc.
- Injection or pouring in cavities between concrete and reinforcing steel plates.
- Surface impregnation with deep penetration by pouring on porous substrates such as concrete, wood, ceramic, stone, etc.
- Anchorage and fixing of metal elements in concrete, stone, etc.
- Sealing by pouring of non-active cracks in concrete pavements.

#### ADVANTAGES

- Very low viscosity. Good penetration in capillary cracks.
- Allows to be mixed with dry fillers to obtain variable viscosity and greater economy.
- Excellent adhesion on construction materials, such as mortars, renders, plasters, concrete, bricks, steel, stone, etc...
- Non-flammable, non-toxic and solvent-free.

#### APPLICATION INSTRUCTIONS

##### Substrate preparation

Surfaces must be structurally sound, clean and free from dust, grease, paints, efflorescence, oils, demoulding agents, gypsum, loose concrete or any other material that could affect the adhesion. Steel surfaces must be dry and dust-free, all corrosion or rust eliminated by sandblasting or grinding.

Fissures and cracks should be cleaned with steel brush eliminating all loose concrete, then seal with

epoxy paste **MAXEPOX® BOND** to avoid the resin may release.

### Packers setting

Apply **MAXEPOX® BOND** using a spatula over the packers base and fix the packers on the crack, taking care of keeping free the interior diameter of the packers (it may be useful to set a small nail inside of the packer). Observe the curing time for **MAXEPOX® BOND**.

The packers should be set along the fissure or crack within a distance of 20 cm to 50 cm each other, according to the specific job repair and the size of the crack. If the crack to be repaired crosses all the structural element section, use set packers in both sides.

### Mixing

**MAXEPOX® INJECTION** is supplied in pre-weighed sets, the hardener, component B, is poured into the resin, component A. Make sure to pour all of component B, to ensure a proper reaction. Mix both components with a low speed mixing drill (300 – 400 rpm) until a homogeneous product is achieved. Do not over work to avoid heating the mix and introduce air bubbles. The pot life of the resin is 20 to 30 minutes at 20° C.

Quartz fillers may be also added in a ratio of 1 / 3 parts of resin / fillers. This ratio depends on the application field and method used. Perform previous test to adjust the ratio resin / fillers desired.

### Application

*Pouring application:* **MAXEPOX® INJECTION** is applied by pouring directly from the mixing container in a continuous procedure to avoid occluded air. The maximum thickness recommended is 10 cm.

*Injection application:* Once **MAXEPOX® BOND** is hardened the injection procedure may start. Check all hoses and crack circuit with air compressed, so there is no blind or blocked points and there is no air blowing through the **MAXEPOX® BOND** seal.

A standard injection procedure should be:

- a) Start the injection in the lowest point until resin starts breeding in the next upper point.
- b) Fold the hose and tie it with wire in order to keep it tightly sealed.
- c) Repeat the procedure up direction following the crack, maintaining some pressure in the injection line to be sure the complete filling of the crack .

- d) Use a manometer in order to keep under control the injection pressure ( between 1,5 and 5 bar)
- e) A sample of the **MAXEPOX® INJECTION** resin from the injection can be used as a resin saw to check the resin hardening.

### Application conditions

The optimum application temperature is between 5° C and 30° C. Do not apply below 5 °C or if lower temperature is expected within 24 hours. At temperatures below 15 °C it is available **MAXEPOX® INJECTION-R** with quicker curing time.

### Curing

The total curing time is 7 days a 20° C and 50 % R.H. Lower temperatures and higher R.H. will increase the curing time. Packers and the **MAXEPOX® BOND** sealing can be removed after 24 hours.

### Cleaning

Working tools or stains can be cleaned immediately with **MAXEPOX® SOLVENT** before use. Once hardens, it can only be removed by mechanical means.

### CONSUMPTION

Estimated consumption is 1 kg of **MAXEPOX® INJECTION** per litre of volume to be filled (1,0 kg/m<sup>2</sup> per mm of thickness).

### IMPORTANT INDICATIONS

- Do not apply for active cracks or fissures.
- Do not apply in cracks under hydrostatic pressure during the injection.
- Allow 28 days of minimum curing for new concrete and mortars.
- For further information and other uses not specified in this Technical Bulletin, consult our Technical Department.

## PACKAGING

**MAXEPOX® INJECTION** is supplied in pre-weighed sets of 1 kg, 2 kg and 5 kg. Others special set by request.



## STORAGE

Twelve months stored in air-tight containers in a temperate and dry place, avoiding temperatures below 5 °C and direct sun light.

Prolonged storage and temperatures below 5 °C produce the crystallising of the product. Should this happen, in order to return the product to normal conditions it must be heated between 80 and 90 °C while being regularly stirred.

## SAFETY AND HEALTH

Avoid contact with the skin, mucous membranes, etc. Do not inhale vapours produced during heating or combustion. Observe the usual precautions necessary for the application of this type of products. Use gloves and safety goggles during the applications. Stains in the skin shall be cleaned immediately with soap and water. In case of eye contact, rinse thoroughly with clean water, but do not rub. Do not use solvents.

For further information, Safety Data Sheet of **MAXEPOX® INJECTION** is available by request.

Disposal of the product and its empty packaging must be made by the final user and according to official regulations.

## TECHNICAL DATA

<b>Product characteristics</b>		
CE Marking, EN 1504-5		
Description: Concrete injection for swelling filling cracks U(F1)W(1)(1/2)(5/30)(0)		
Uses: Building and civil engineering works		
Principles: Protection against ingress by filling cracks (Principle 1-PI/1.4) (Principle 4-SS/4.5-4.6)		
<b>Characteristics of components</b>		
Component A appearance and colour	Clear liquid	
Component B appearance and colour	Yellowish liquid	
Solids content A + B (% in weight)	100	
Density of component A (g/cm <sup>3</sup> )	1,1± 0,1	
Density of component B (g/cm <sup>3</sup> )	0,9± 0,1	
<b>Application and curing conditions</b>	<i>No fillers</i>	<i>With fillers ratio 1 : 3</i>
Pot life at 20° C (min)	20 - 30	
Initial curing time at 25° C (h)	8	12
Total curing time at 25° C (days)	7	7
<b>Cured product characteristics</b>		
Compressive strength (MPa)	80	90
Flexural strength (MPa)	30	35
Elasticity modulus (MPa)	8500	12000
Linear expansion coefficient (cm/°C)	2,5 . 10 <sup>-5</sup>	3,5 . 10 <sup>-5</sup>
Flash point	Non-flammable	
Critical temperature (°C)	60	
Dry concrete adhesion	Good (substrate failure)	
Wet concrete adhesion	Good (substrate failure)	
Chemical resistance	Excellent	
Water resistance	Excellent	
<b>Essential characteristics</b>		
Adhesion by tensile bond strength (fissure width: 0,8 mm), EN 1504-5 (MPa)	> 3	
Injectability in dry medium (crack width: 0,1 / 0,2 / 0,3 mm), EN 1504-5 (min)	< 8	
Injectability no dry medium (crack width 0,1 / 0,2 / 0,3 mm), EN 1504-5 (min)	< 8	
Injectability in dry medium (fissure width 0,5 / 0,8 mm), EN 1504-5 (MPa)	> 3	
Adhesion by tensile bond strength	> 3	
Injectability no dry medium (fissure width: 0,5 / 0,8 mm), EN 1504-5 (MPa)	> 3	
Adhesion by tensile bond strength	> 3	
Tensile strength development for polymers (after 72 h), EN 1504-5 (MPa)	> 3	
Adhesion tensile bond strength with thermal dry-wet cycling, EN 1504-5 (MPa)	> 3	
Compatibility with concrete, EN 1504-5 (MPa)	> 3	
Adhesion by tensile bond strength	> 3	
Dangerous substances, EN 1504-5	Comply 5.4	

## GUARANTEE

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. **DRIZORO®**, **S.A.U.** reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real data, a test on the jobsite must be done, and it will be carried out under the client responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.



### DRIZORO, S.A.U.

C/ Primavera 50-52 Parque Industrial Las Monjas  
28850 TORREJON DE ARDOZ – MADRID (SPAIN)  
Tel. 91 676 66 76 - 91 677 61 75 Fax. 91 675 78 13  
e-mail: info@drizoro.com Web site: drizoro.com