



MAXEPOX[®]

BOND

TWO-COMPONENT EPOXY BONDING AGENT



DESCRIPTION

MAXEPOX[®] BOND is a two-component and 100% solids –solvent free- epoxy-based bonding agent, which has been specially designed for the bonding of construction materials.

MAXEPOX[®] BOND is specially designed for use as a bonding bridge between fresh concrete or structural repair mortars and hardened concrete, as well as metal plates and hardened concrete.

It complies with the requirements of Standards UNE-EN 1504-4 for structural adhesion and UNE-EN 1504-7 for corrosion protection of reinforcement.

APPLICATION FIELDS

- Bonding of fresh concrete to roughened fully cured concrete.
- Bonding concrete to all type of construction materials such as stone, marble, wood, glass, etc.
- Bonding between concrete and metal surfaces, as well as bonding steel plates and strips to each other or to concrete.

ADVANTAGES

- Exceptional adhesion.
- Excellent mechanical properties.
- Very good resistance to chemical agents and ageing.
- Cures without shrinkage.

APPLICATION INSTRUCTIONS

Surface preparation

Surface to be bonded must be structurally sound and clean, free of dust, coatings, efflorescences, oil, grease, gypsum, or any foreign material that could affect to adhesion. Substrate should be provided with a slight roughness and must be dry. There must be no rising damp due to capillarity. Surface moisture must be less than 4%.

The surface tensile strength of the concrete or cement mortar substrate must exceed a value of 1.5 N/mm².

Additional information concerning to the surface preparation and application procedure can be found on our technical note *Recommendations for the use of epoxy-based bonding agents*.

Mixing

MAXEPOX[®] BOND is supplied as a pre-weighed two-component set. The hardener, component B, is poured into the main component A. To ensure the proper reaction between both components, make sure that all of component B is added (partial mixtures are not recommended). Mix mechanically using a slow speed drill (up to 300 rpm) until achieving a homogeneous product in colour and appearance. Do not mix for prolonged period nor use high-speed mixer, which may heat the mixture or introduce air bubbles.

Check the technical data table for the pot-life or time it takes the product to harden inside the container.

Application

Apply **MAXEPOX[®] BOND** in a thin layer on the surface to be bonded, using a short haired brush, short pile roller, spatula, etc. Apply a uniform and homogenous layer with consumption from about 0,3 to 1,0 kg/m², depending on the surface conditions, its roughness and porosity.

Application conditions

MAXEPOX[®] BOND has been designed to be applied to dry surfaces and at curing temperatures above 5°C. If the concrete contains humidity, it is not sufficient to dry the surface with hot air, as the humidity within the concrete will quickly rise to the surface. In this case use **MAXEPOX[®] BOND -W** (Technical Bulletin No. 75).

MAXEPOX[®] BOND cures better at temperatures above 10°C and does not cure if the temperature is below 5°C, in which case conditions above this temperature must be created on the substrate at least for the duration of the curing process. Consult the technical data table (at 10°C, the complete curing time is 5 days).

Curing

New concrete or construction material must be placed while **MAXEPOX® BOND** is still tacky in the open time interval. If bonding agent dries before next application, apply it again. Consult the technical data table; open time at 20°C is 2 hours, increasing with lower temperatures and reducing with higher temperatures.

Cleaning

Tools and equipment can be cleaned with **MAXEPOX® SOLVENT** immediately after use. Once the product hardens, it can only be removed by mechanical methods. Do not use any solvent at all for personal cleaning.

CONSUMPTION

The estimated consumption for **MAXEPOX® BOND** varies from 0,3 kg/m² to 1,0 kg/m². These figures may vary depending on the roughness, surface conditions and the application method. A preliminary test on-site will determine the coverage exactly.

IMPORTANT INDICATIONS

- Surface moisture content must not exceed 4%.
- The surface tensile strength of the concrete or cement mortar substrate must be greater than 1.5 N/mm².
- Allow new concrete and mortar to cure 28 days before applying **MAXEPOX® BOND**.
- Do not apply when relative humidity exceeds 85%, as this may result in poor curing.
- Avoid condensation, damp, or water contact for at least 24 hours after application.
- Do not add water, solvents, aggregates, admixtures, or any other compounds to **MAXEPOX® BOND**.

- For further information and other uses not specified in this Technical Bulletin consult our Technical Department.

PACKAGING

MAXEPOX® BOND is supplied in two-component pre-weighed sets of 2, 5 and 10 kg.

STORAGE

Twelve months in its original unopened containers in a dry and covered place, with temperatures between 5°C and 35°C. Protect against direct sunlight and frost.

Temperatures below 5°C lead the crystallization of the product. Should this happen, it must be heated slowly while is regularly stirred until achieving its homogeneous and original lump-free conditions.

SAFETY AND HEALTH

MAXEPOX® BOND is not a toxic product in its composition but contact with skin and eyes should be avoided. When mixing and applying **MAXEPOX® BOND**, do not work without the protection of rubber gloves and safety goggles. Do not inhale vapours from heating and combustions process. In case of eye contact, rinse immediately with clean water without rubbing and seek medical assistance. In case of skin contact, wash with abundant water and soap. If ingested, seek immediate medical assistance. Do not induce vomiting. Observe the usual precautions necessary for the use and applications of this type of product.

For further information, Safety Data Sheet for **MAXEPOX® BOND** 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

Characteristics of the product			
CE Marking, EN 1504-4			
Description: Two-component, epoxy based bonding agent.			
Principles/Methods. Structural strengthening by plate bonding (Principle 4-SS/4.3), Structural strengthening by adding mortar or concrete (Principle 4-SS/4.4),			
CE Marking, EN 1504-7			
Description. Two-component, epoxy based bonding agent.			
Principles/Methods. Control of anodic areas by painting reinforcement with coatings containing active pigments (Principle 11-CA/11.1), Control of anodic areas by painting reinforcement with barrier coatings (Principle 11-CA/11.2)			
A:B mixing ratio (by weigh)	5:1		
Conditions for application and curing			
Temperature for application and curing, (°C)	> 5		
Pot life ISO 9514 (min)			
- 10°C	75		
- 23°C	45		
- 35°C	30		
Time for total curing at 10°C / 20°C / 30°C, (d)	5 / 4 / 3		
Characteristics for cured product			
Compressive strength, UNE EN 12190 (MPa)	75,8		
Modulus of elasticity, EN 13142 (MPa)	> 2000		
Thermal expansion coefficient, UNE EN 1770 (µm/m °C)	87		
Linear shrinkage, UNE EN 12617-1 (%)	0,08		
Glass transition temperature, UNE EN 12614 (°C)	52,7		
Shear strength, UNE EN 12615	Breaking load (N)	Shear strength (N/mm ²)	
	246510		
Hardened concrete – Hardened concrete	(A) Concrete break	10,7	
Hardened concrete – Fresh concrete	225740		
	(A) Concrete break	9,8	
Adhesion, UNE EN 1542 (N/mm ²)	- 10°C	3,2	
	- 23°C	3,4	
	- 35°C	3,5	
Adhesion concrete – concrete, UNE EN 1236 (N/mm ²)	3,5 (breaking load for tensile)		
Determination of the open time, UNE EN 12189	Breaking load for flexural at 7 days		
	23°C	35°C	
- 30 min	7630 (cohesive break in concrete)	7250 (cohesive break in concrete)	
- 45 min	7250 (cohesive break in concrete)	7600 (cohesive break in concrete)	
- 60 min	7120 (cohesive break in concrete)	6850 (interface break)	
- 75 min	7250 (cohesive break in concrete)	-	
- 90 min	5840 (interface break)	-	
- 105 min	-	-	
Durability of structural bonding agents, UNE EN 13733			
	Hardened concrete – Hardened concrete		
	- After 50 thermal cycles	PASS	
	- After 6 months in hot-wet environment	PASS	
	Hardened concrete – Fresh concrete		
	- After 50 thermal cycles	PASS	
- After 6 months in hot-wet environment	PASS		
Consumption			
Consumption* per coat, (kg/m ²)	0,3-1,0		

(*) These figures may vary depending on the roughness and the surface conditions. A preliminary test on-site will determine the coverage exactly.

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.



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