DRIZORO® Construction Products

MAXEPOX® ELASTIC

TRANSPARENT AND ELASTIC EPOXY RESIN FOR SEALING JOINTS, TROWEL-GRADE MORTARS AND ELASTIC COATINGS FOR PAVEMENTS

DESCRIPTION

MAXEPOX® ELASTIC is a two-component, solvent-free, transparent and elastic epoxy resin, specifically designed for sealing of joints and cracks, obtaining elastic trowel-grade mortars, and elastic coating of concrete pavements.

APPLICATIONS

- Sealing and elastic filling of construction joints in pavements.
- Elastic sealing and crack-bridging coating for multi-fissures pavements.
- Priming and base coat for flooring systems subjected to thermal movements, vibrations or high risk of cracking.
- Obtaining of elastic trowel-grade mortars by recycled rubber or cork, with noise reduction and vibration absorption properties, for fixing and filling urban tramway rails.
- Obtaining of flexible mortars with silica sand, as coating with high movement capability, grouting or filling of machinery supporting, etc.

ADVANTAGES

- High elasticity and crack bridging up to 1,25 mm.
- Resistant to a wide range of temperatures: from -30 °C to 80 °C.
- High fluidity, allows its application by pouring.
- Waterproofing properties.
- Very good chemical resistance against a wide range of chemical compounds: oils and greases, petrol, diluted acid and alkali solutions, solvents, salts, etc.
- Excellent adhesion directly on concrete, cement mortar, steel, wood, aluminium, glass substrates, etc.
- Allows high sand:resin ratio, saving costs in fillings and anchoring applications.
- Non-toxic, solvent-free, 100% solids and non-flammable. Suitable for poor ventilated areas.

APPLICATION INSTRUCTIONS

Surface preparation
Concrete surface must be structurally sound and clean, free of dust, old coatings, efflorescences, oil, grease, etc and preferably with a slight roughness, i.e. open textured surface. Substrate must be dry, with moisture content below 5 %. Do not apply on substrates subject to rising damp or negative water pressure.

Consult our technical note *Preparation of concrete surfaces for application of epoxy-based coatings* for further information.

In case of smooth and/or poorly absorbent concrete and cement mortars, provide a mechanical texturing by abrasive disc, dry sand-blasting, scarification or other abrasive method to achieve a slightly textured surface, not being desirable aggressive mechanical or chemicals means. Finally, vacuum the dust and loose particles.

All small voids, holes, honeycombs, cavities, once opened must be patched with the ***MAXEPOX® CEM*** epoxy-cement mortar (Technical Bulletin No. 197) or with the ***MAXEPOX® JOINT*** epoxy-based mortar (Technical Bulletin No. 237).

Steel surface:
Metal surfaces should be cleaned to remove all traces of corrosion, and must be degreased, dry and free of dust.

Mixing
MAXEPOX® ELASTIC is supplied as a pre-weighed two-component set. The hardener, component B, is poured into the main component A, which should be previously homogenized. Mix mechanically using a slow speed electric stirrer (up to 300-400 rpm) until achieving a homogeneous product in colour and appearance. Small quantities of product can be mixed also by hand. Do not mix for prolonged period nor use high-speed mixer, which may heat the mixture or introduce air bubbles.

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The pot-life is 45 minutes at 20 ºC. Temperatures above 30 ºC lead a quick-setting between components and heat production, so the pot-life is greatly reduced.

For preparing a mortar with silica sand, once the resin binders (components A+B) are mixed, add dry and clean silica sand ***DRIZORO® SILICA***, or colour silica sand ***MAXEPOX COLOUR***, and continue the mixing until a homogeneous mortar in colour and appearance is achieved.

Application

As primer previous to next epoxy or polyurethane coatings: Apply by brush or roller one coat of ***MAXEPOX® ELASTIC*** with a recommended consumption of 0,4-0,5 kg/m^2.

As elastic coating for pavements: Apply ***MAXEPOX® ELASTIC*** by brush or short-piled roller in two successive coats, with a recommended consumption of 0,4-0,5 kg/m^2 per coat. Allow first coat to dry completely until tack-free before applying next one, about 24 hours at 20°C, depending on temperature conditions.

For sealing active cracks, reinforce the first coat of ***MAXEPOX® ELASTIC*** with a strip of 6-8 cm width glass-fibber veil ***DRIZORO® VEIL G45*** (Technical Bulletin n° 209), ensuring it is completely embedded on the fresh coat. Once it is dry, apply the second coat of ***MAXEPOX® ELASTIC*** with similar consumption.

As trowel-grade mortar: Once primer is dry and tack-free, apply evenly ***MAXEPOX® ELASTIC*** (components A+B+ sand) by metal trowel to the desired thickness. Finish with finishing trowel.

As elastic sealing of joints: Minimum and maximum joint width is between 6 mm and 30 mm respectively. Joint depth must be the half of joint width, with the exception of joint width under 15 mm, where the depth and width must be equal. Joint width should be at least four times than the maximum joint movement expected. Use a closed cell polyethylene backer rod such as ***MAXCEL®*** (Technical Bulletin n 48) with a diameter 25% larger than joint diameter, in order to control joint depth and to prevent bond on bottom. Pour directly or extrude by gun ***MAXEPOX® ELASTIC*** inside the joint and level it to form a clean joint bead.

As filling, anchoring and grouting of metal elements: ***MAXEPOX® ELASTIC*** is placed simply pouring by gravity directly from the mixing container. In order to avoid cold joints and minimize the chance of air entrapment, elastic mortar should be placed in a continuously way and also in one direction from one side to the other.

Application conditions

Do not apply if rain, contact with water, condensation, dampness and dew is expected within the first 48 hours.

Optimum application temperature range is from 10 ºC to 30 ºC. Do not apply with substrate and/or ambient temperature is at or below 10 °C, or when are expected within 48 h after application. Do not apply on frozen or frost-covered surfaces.

Ambient and surface temperature must be at least 3 ºC higher than dew point. Measure the relative humidity and dew point before application.

With low temperatures, high humidity levels or both, use dry and warm air in order to get the suitable conditions, such as with an electric powered air blower system.

Temperatures above 30 ºC lead a quick-setting between components and heat production, so the pot life is greatly reduced.

Curing

Allow a full curing time of 48 hours at 20 °C and 50% R.H. before putting into service. Applications carried out at lower temperatures, high humidity and/or poor ventilation require longer drying and curing times.

Cleaning

All tools and equipments can be cleaned with ***MAXEPOX® SOLVENT*** immediately after use. Once the product cures, it can only be removed by mechanical methods.

CONSUMPTION

Priming: estimated consumption of ***MAXEPOX® ELASTIC*** is 0,4-0,5 kg/m^2 per coat.

Elastic coating of pavements: estimated consumption of ***MAXEPOX® ELASTIC*** is 0,4-0,5 kg/m^2 per coat, for a total consumption of 0,8-1,0 kg/m^2 in two coats.

Elastic filling, anchoring and sealing of joints: estimated total consumption for ***MAXEPOX® ELASTIC*** is about 1,1 kg per litter of volume to be filled.
Trowel mortar: depending on ratio and type of sand mixed.

These figures may vary depending on porosity, substrate conditions and application method, a preliminary test on-site will determine the consumption exactly.

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IMPORTANT INDICATIONS

- Surface moisture content of substrate must not exceed 5 %. Do not apply on substrates subject to rising humidity or negative water pressure.
- Allow new concrete and mortar to cure a minimum of 28 days before applying ***MAXEPOX® ELASTIC***.
- Avoid water contact, damp, dew, condensation, etc for at least 48 hours after application.
- Aggregate must be thoroughly dry before mixing with resin components A+B.
- Do not add solvent or any other non-specified compound to ***MAXEPOX® ELASTIC***.
- For further information and other uses not specified on this Technical Bulletin consult our Technical Department.

PACKAGING

MAXEPOX® ELASTIC is supplied in two-component pre-weighed set of 20 kg.

STORAGE

Component A and component B, six months in its original unopened packaging, in a dry and covered place protected from humidity, frost and direct sunlight, with temperatures between 5 and 30 °C. Temperatures below 5 ºC may lead the crystallisation of component A and B. Should this happen, it must be heated slowly between 80-90 ºC while it is regularly stirred until achieving its homogeneous and original lump-free appearance.

SAFETY AND HEALTH

MAXEPOX® ELASTIC component A and B are not a toxic product but skin and eye contact must be avoided. When mixing and applying, do not work without the protection of rubber gloves and safety goggles. In case of eye contact, rinse immediately with clean water but do not rub. In case of skin contact, wash affected area with abundant water and soap. If irritation persists, seek medical assistance.

Do not inhale vapours from heating or burning. Observe the usual precautions for the handling and the application of this type of products.

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

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

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TECHNICAL DATA

Characteristics of the product	
Appearance and colour for component A and B	Transparent liquid
A:B mixing ratio (by weight)	1,0:1,35
A+B solid content (%)	100
A+B density (g/cm^3)	1,02 ± 0,1
Flash point	Non-flammable
Application and curing conditions	
Minimum application and substrate temperature (ºC)	>10
Pot life for A+B at 10 ºC/ 20 ºC/ 30 ºC (min)	60 / 45 / 30
Drying-time to touch for A+B at 10 ºC/ 20 ºC/ 30 ºC (hours)	24 / 18 / 8
Waiting time between coats at 20 °C (hours)	24
Curing time at 20 ºC, (hours)	48
Characteristics for cured coating	
Tensile strength and elongation at 20 °C, (MPa) / (%)	0,4 / 190
Tensile strength and elongation at -10 °C, (MPa) / (%)	1,20 / 75
Shore A Hardness, ISO 868	45
Crack bridging ability, EN 1062-7:2004 - Width of the bridged crack (mm) - Class	 1,25 A4
Consumption*	
Application as primer, (kg/m^2) Application as pure elastic coating per coat / total application (kg/m^2) Application as elastic grouting of joints (kg/L)	0,4-0,5 0,4-0,5 / 0,8-1,0 1,05-1,15

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

GUARANTEE

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