



MAXEPOX[®]

REPAIR -V

STRUCTURAL REPAIR EPOXY-BASED MORTAR FOR VERTICAL SURFACES WITH HIGH CHEMICAL AND MECHANICAL PERFORMANCES

DESCRIPTION

MAXEPOX[®] REPAIR -V is a thixotropic, solvent-free, selected aggregates, epoxy-based mortar, specially designed for levelling, protection and concrete repair, providing a high-performance surface with excellent mechanical and chemical resistance, as well as high abrasion and impact resistance. Its good thixotropy allows horizontal and vertical applications with thickness per layer until 40 mm.

APPLICATION FIELDS

- Structural repair of concrete in industrial areas exposed to chemical attack: waste water treatment plants, cooling towers, chimneys, chemical and fertilizer factories, etc.
- Repair of concrete damaged by aggressive environments: acid rain, atmospheric pollution, marine environment, freeze-thaw cycles, de-icing salts, etc.
- Repair of paving, ramps and joint edges in floors with high resistance to traffic wear and to impact.
- Restoration of concrete steps and stairs, fixing of heavy machinery, etc.
- Structures to be repaired submitted to dynamic loads.

ADVANTAGES

- High mechanical resistances, starting and ending.
- Excellent thixotropy and workability: thickness from 5 to 40 mm.
- Good abrasion and impact resistance.
- Excellent chemical resistance.
- It does not shrink, avoiding risk of cracks when sets.
- Non-toxic, solvent-free, 100% solids and non-flammable. Suitable to use in poor ventilated areas.
- Excellent adhesion.

APPLICATION INSTRUCTIONS

Surface preparation

Substrate must be structurally sound, firm, without cement laitance, clean and free of paints, old coatings, efflorescence, loose particles, grease, oils, curing agents, form release agents, dust, gypsum plasters, organic growth or any other contaminants that may affect to adhesion. Surface moisture content should not exceed 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.

All cracks and fissures must be opened with a minimum depth of 2 cm

Non-structural and surface iron elements must be cut to a depth of at least 2 cm and then covered with structural repair mortar. Exposed all corroded reinforcement, removing all the concrete until the edge of the bars are not affected by rust. Remove concrete all around the reinforcement cleaning and to surround it with a minimum thickness of at least 1 cm of structural repair mortar. Eliminate rust by wire brush, needle gun, sand or shot blasting, etc. Apply by brush the oxide converter and anti-corrosion protection **MAXREST[®] PASSIVE**.

Expansion joints or cracks subject to movements once opened up and clean, should be treated with a suitable elastomeric sealant from **MAXFLEX[®]** range.

Concrete and cement-mortars: Provide a mechanical texturing by abrasive disc, dry sand-blasting, scarification or other abrasive method to achieve at least a slightly textured surface, not being desirable aggressive mechanical or chemicals means. Finally, vacuum the dust and loose particles.

Mixing

MAXEPOX[®] REPAIR -V is supplied as a pre-weighed two-component set. Premix the components A and B separately, and then pour the Component A into the Component B. Mix preferably with a low speed mixing drill (400-600 rpm) until achieving a

homogeneous product in colour and appearance. This mixture A+B can be used as primer.

Finally, pour the resulting mixture in a clean container and then slowly add component C to the liquid and mix, using a slow speed electric drill (400-600 rpm) fitted with a disc mixer for about 1-2 minutes until achieving the required consistency depending of the use for horizontal or vertical surfaces. Small quantities of product can also be mixed by hand. Do not mix for prolonged period nor use high-speed mixer, which may heat the mixture or introduce air bubbles.

Check Technical Data Table for product pot life (30-40 minutes at 20°C for an 8 kg set or 4 kg set). Pot life is reduced greatly with higher temperatures.

Application

Apply by brush one coat of primer with the mixture A+B. Other primers such as **MAXEPOX® PRIMER** or **MAXEPOX® BOND** can be used following the application instructions of their respective Technical Bulletins.

Over the recently primed surface, while it is still fresh, apply **MAXEPOX® REPAIR -V** using a metal trowel to the desire thickness in layers between 5 to 40 mm.

Successive layers should be applied when the previous one is completely set, i.e., 8-10 h at 20°C and 50% R.H.

Application conditions

Do not apply when rain, contact with water, condensation, dampness and dew is expected within the first 24 h after application.

Optimum application temperature range is from 10 °C to 30 °C. Do not apply with substrate and/or ambient temperature is at or below 10 °C, or when are expected to fall below 10 °C within 24 h after application. Do not apply to frozen or frost-covered surfaces. Temperatures above 30 °C lead a quick-setting between components and heat production, so the pot life is greatly reduced.

Ambient and surface temperature must be at least 3°C higher than dew point. Do not apply with R.H. higher than 90%. Measure the relative humidity and dew point before applying the product.

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.

Curing

Allow **MAXEPOX® REPAIR -V** to cure 24 hours at 20°C and 50% R.H. before putting it into service.

Application at lower temperature, high humidity and/or poor ventilation requires longer curing time.

Cleaning

All tools and equipment must be cleaned immediately with **MAXEPOX® SOLVENT** after use. Once product cures, this can only be removed by mechanical means.

CONSUMPTION

Estimated consumption for **MAXEPOX® REPAIR -V** is 2,0 kg/m²·mm thickness.

These figures are for guidance only and may vary depending on porosity, texture, substrate conditions and application method. Perform a preliminary test on job-site to ascertain the total consumption.

IMPORTANT INDICATIONS

- In outdoor applications, can be affected by a superficial colour change due to be exposed to UV rays, but it will not influence the mechanical properties. In case of require a decorative finishing stable for a long period of time, cover with the aliphatic polyurethane **MAXURETHANE® 2C**.
- Do not apply on substrates subject to rising damp or negative water pressure. Surface moisture content must be below 5%. Allow substrate to dry enough after rain, water contact, damp, dew, condensation, etc, as well as after cleaning of surface.
- Allow new concrete and mortar to cure a minimum of 28 days before application.
- Avoid water contact, damp, dew, condensation, etc for at least 24 hours after application. Relative humidity must not exceed 90%.
- Component C must be fully dry before mixing with the binder (A+B).
- For other uses not specified in this Technical Bulletin or further information, consult the Technical Department.

PACKAGING

MAXEPOX® REPAIR -V is supplied in pre-weighed three-components sets of 4 kg (Component A: 0,56 kg can, Component B: 0,28 kg can, and Component C: 3,16 kg bags) and 8 kg (Component A: 1,12 kg can, Component B: 0,56 kg can, and Component C: 6,32 kg bags).

STORAGE

Twelve months in its unopened and undamaged original sealed packaging. Store in a cool, dry and

covered place, protected from moisture, frost and direct sunlight, with temperatures between 5°C and 30°C.

Storage at temperatures below 5°C may lead the crystallisation of product components. Should this happen, it must be heated slowly at moderate temperature while it is regularly stirred until achieving its homogeneous and original lump-free appearance.

SAFETY AND HEALTH

MAXEPOX[®] REPAIR -V is not a toxic product but contact with skin and eyes must be avoided. Use rubber gloves and safety goggles when handling, mixing and applying the product. In case of skin

contact, wash affected area with soap and water. In case of eye contact, rinse immediately thoroughly with clean water but do not rub. If the 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.

Consult the Material Safety Data Sheet for **MAXEPOX[®] REPAIR -V**.

Disposal of the product and its packaging should be carried out according to the current official regulations and it is the responsibility of the final user of the product.

TECHNICAL DATA

Product characteristics	
General appearance and colour for component A	Transparent clear liquid
General appearance and colour for component B	Transparent clear liquid
General appearance and colour for component C	Silica aggregate
Maximum aggregate size for component C, (mm)	< 4,0
A+B+C mixture appearance	Clear brown
A:B:C mixing ratio, (by weight)	
- Binder (A:B)	2:1
- Binder:aggregate (A+B:C)	1:4
A+B+C mixture density, (g/cm ³)	2,0±0,1
A+B+C mixture solid content, (%)	100
Chloride content, EN 1744-1 (%)	<0,01
Solvent content	Solvent-free
Flash point, (°C)	Non-flammable
Application and curing conditions	
Application conditions, T(°C) / R.H. (%)	10-30 / <90
Open time for A+B mixture at 20 °C and 50 % R.H., (min)	20
Open time for A+B+C mixture at 20 °C and 50 % R.H., (min)	30-40
Setting time and waiting time between applications at 20 °C and 50 % R.H., (h)	8-10
Cured products characteristics	
Flexural strength at 7 days, EN 12190 (MPa)	>23
Compressive strength at 7 days, EN 12190 (MPa)	> 65
Adhesion on concrete with priming, EN 1542 (MPa)	>3,0
Adhesion on concrete with priming after dry thermal cycling, EN 13687-4 (MPa)	>3,0
Permeability to water, w (kg/m ² ·min ^{1/2})	0,002
Resistance to water, sewage and marine water	Excellent
Resistance to oils, salts, diluted acids and alkalis	Excellent
Thickness / Consumption*	
Thickness per application, (mm)	5-40
Consumption per application, (kg/m ² ·mm)	2,0

* These figures are for guidance only and may vary depending on porosity, texture, substrate conditions and application method. Perform a preliminary test on job-site to ascertain the total consumption 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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