



# MAXRITE® -K

## POLYMER-MODIFIED REPAIR MORTAR FOR STRUCTURAL CONCRETE

### DESCRIPTION

**MAXRITE® -K** is a one component thixotropic shrinkage-compensated mortar, with normal setting-time, made of special cements, selected aggregates and polymers. It is specially designed for structural concrete repair, applied by trowel without the need for using any form work.

### APPLICATION FIELDS

- General structural concrete repair, on vertical or overhead surfaces, without form works.
- Repairing of lines and shapes in pre-fabricated concrete elements and structures damaged by mechanical impacts, corrosion of reinforcements, freeze cycles, etc.
- Repair of pillars, lintels, raincaps and architectural concrete exposed permanently to extreme weather condition.

### ADVANTAGES

- Excellent thixotropy, it allows application thickness up to 40 mm per layer.
- High adhesion on concrete and reinforcements, no special primers needed. Loads are transmitted onto the repaired structure.
- High mechanical strength and impact resistance. Long-lasting repairs.
- Waterproof and very good cohesion.
- Excellent workability and easy application, it only needs water for mixing.
- Shrinkage-compensated mortar with no risk of cracks.
- It does not contain chlorides or others corrosive agents for reinforcements.
- It is odourless and non-toxic, suitable for poor ventilated areas, water tanks, etc.

### APPLICATION INSTRUCTIONS

#### Preparation of the surface

Surface must be clean and free of dust, grease, salts, curing or de-moulding agents, paints or other films, etc. Remove unsound mortars and all damaged concrete to achieve a structural resistant substrate, clean cut the edges perpendicularly to a minimum depth of 10 mm. Expose all corroded reinforcement, removing all the concrete until the edges of the bars are not affected by rust. Remove concrete all around the reinforcement for an efficient cleaning and to surround it with a minimum thickness of at least 1 cm. of **MAXRITE® -K**

Eliminate rust by wire brush, needle gun, sand or shot blasting, etc. Apply by brush the oxide converter and anti-corrosion protector **MAXREST® PASSIVE** (Technical Bulletin Nº.: 12).

Prior to application of **MAXRITE® -K**, dampen the surface until saturation but do not leave free-standing water.

#### Mixing

A 25 kg bag of **MAXRITE® -K** requires about 3,25 to 3,75 litres (14 ± 1% by weigh) of clean water. Pour the powder on a recipient with the water required and mix mechanically by low speed drill (400 – 600 rpm) equipped with disc **MAXMIXER** until achieving a lump free homogeneous mortar. Smaller quantities can be mixed manually. The mixing ratio is indicative and should be checked depending on the desired consistency and the existing temperature conditions.

#### Application

For an optimum bonding prepare a slurry, mixing 5 parts of **MAXRITE® -K** with 1 part of water, mixing well until achieving a homogeneous consistency without any lumps. Apply the slurry using a **MAXBRUSH** type brush on the surface to be repaired and on the reinforcement bars, filling all voids and pores.

While the slurry is still fresh, start placing **MAXRITE® -K** with the consistency of repair

mortar and apply layers between 5 and 40 mm thickness. Press with the trowel to prevent any air from being trapped. Scratch surface of each layer with the trowel to improve the adhesion of the following one, which can be placed after hardening and applying previously the slurry coat. Shape the last layer as desired before the final hardening occurs.

Once the repair area is finished it can be protected with cement-based coating **MAXSEAL®** (Technical Bulletin N°.: 01) or **MAXSEAL® FLEX** (Technical Bulletin N°.: 29), or acrylic-based coating **MAXSHEEN®** (Technical Bulletin N°.: 17) available in a wide range of colours.

### Application conditions

Do not apply with substrate and ambient temperature below 5 °C or if lower temperature is expected during the first 24 hours. Do not apply on frost surfaces.

### Curing

Preferably provide a moist curing the first 24 hours if high temperature (> 35 °C) under direct sun light and/or windy days, protecting with wet burlaps or rags covered with plastic sheets, fogging with water or using a quality curing agent such as **MAXCURE®** (Technical Bulletin n°.:49).

### Cleaning

Tools and equipments should be cleaned immediately with water after use. Once it sets, can only be removed by mechanical methods.

### CONSUMPTION

Estimated consumption of **MAXRITE® -K** is approximately 1,9 kg/m<sup>2</sup> per mm thickness. One 25 kg sack of **MAXRITE® -K** fills 13,1 litres approximately (0,52 l/ kg of product). Consumption depends on porosity, texture and substrate conditions, a preliminary test on-site will determine consumption exactly.

### IMPORTANT INDICATIONS

- Do not add cement, aggregates or other non-specified compounds to **MAXRITE® -K**.
- Do not use high speed mixers which may cause a violent mix. Do not over mix.
- Do not use **MAXRITE® -K** leftovers to prepare a new mix.
- Remix again briefly the fresh mortar to keep its workability, but do not add more water.
- If the slurry primer or previous layer dries up, apply a new slurry coat to continue the job.
- Do not exceed maximum thickness recommended per layer.
- In contact with water or ground with sulphates, residual water or sea water, use the type **MAXRITE® -K ANTISULFAT**.
- For any other application not specified on this technical bulletin, consult our Technical Department.

### PACKAGING

**MAXRITE® -K** is supplied in 25 kg bags.

### STORAGE

Twelve months in its original unopened packaging, in a dry and covered place, protected from frost and humidity with temperature above 5 °C.

### SAFETY AND HEALTH

**MAXRITE® -K** is non-toxic but it is an abrasive compound. Avoid eye and skin contact. Rubber gloves and safety goggles must be used during the application. In case of skin contact, wash affected areas with soap and water. In case of eye contact, rinse with clean water but do not rub. If irritation continues, seek medical attention.

Safety Data Sheet of **MAXRITE® -K** is available by request.

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

## TECHNICAL DATA

<b>Characteristics of powder</b>	
Appearance and colour	Grey powder
Aggregate size (mm)	0 - 2
Apparent density (kg/m <sup>3</sup> )	1,50 ± 0,10
<b>Characteristics of fresh mortar and application conditions</b>	
Mixing water (% weight w/ prod.)	14 ± 1
Minimum application temperature (°C)	> 5
Setting time (hours, at 20 °C)	
- Initial	3 – 4
- Final	7 – 8
<b>Characteristics of cure mortar</b>	
Dry density (kg/m <sup>3</sup> )	2 ± 0,10
Flexural strength (MPa)	
- 7 days	> 5
- 28 days	> 7
Compressive strength (MPa)	
- 7 days	> 40
- 28 days	> 50
Capillarity, C <sub>m</sub> (kg / m <sup>2</sup> min <sup>0,5</sup> )	0,4
Adhesion on concrete at 28 days (MPa)	> 2
<b>Estimated consumption/ thickness</b>	
Minimum and maximum thickness per layer (mm)	10 - 40
Estimated consumption* (kg/ m <sup>2</sup> per mm thickness)	1,9

\* Depending on porosity, texture and substrate conditions.

## 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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