



# MAXRITE® -S

## SINGLE COMPONENT MORTAR FOR THE REPAIR OF LARGE SURFACES BY SPRAYING

### DESCRIPTION

**MAXRITE® - S** is a normal setting, single component polymer-modified mortar, made up of special cements, selected aggregates and special resins, especially designed for the application over large surfaces. Its formulation allows it to be applied by dry or wet-process spraying, as well as manually by trowel, over substrates such as concrete, concrete blocks, mortars, stone, etc.

### APPLICATIONS FIELDS

- Repairing horizontal and vertical large areas, with no need of using formworks.
- Repairing and lining of underground jobs, tunnels, galleries, etc.
- Repairing deteriorated concrete structures and pre-cast elements by corrosion of reinforcement, freeze-thaw cycles, aggressive environments, etc.
- Strengthening retaining walls and inclines.
- Repairing industrial and residential buildings.
- Floor thickness increase.

### ADVANTAGES

- Excellent thixotropy. Allows applications up to 5 cm thick per layer without slump.
- Good bonding over traditional construction substrates.
- Linings done with **MAXRITE® - S** provide good protection against carbonation.
- Its low elasticity modulus and normal setting allow stress free hardening, which reduces the risk of scaling.
- Designed for dry-mix spray method with low rebound percentage and scarce dust formation.
- Good waterproofing properties.
- Good resistance to sulphates, ice and de-icing salts.

- Single component. Only needs water for the mix.
- Excellent workability.
- Non-toxic.

### APPLICATION INSTRUCTIONS

#### Preparation of the substrate

Substrate must be structurally sound and clean, free of grease, form stripping oils, etc. Remove loose concrete and cut edges perpendicularly to a minimum depth of 5 mm. Expose all corroded reinforcement for an efficient cleaning and to surround it with at least 1 cm. thickness of **MAXRITE® -S**. Eliminate rust by wire brush, needle gun, sand or shot-blasting, etc and apply the oxide converter and protector **MAXREST® PASSIVE** (Technical Bulletin N° 12).

Prior to application, dampen surface until saturated but do not leave free-standing water. For an optimum adhesion, prepare a bonding slurry, mixing 5 parts of **MAXRITE® -S** 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® -S** with the consistency of a repair mortar and apply layers between 5 and 50 mm thick.

Generally, priming will not be necessary. For special applications engineers on-site may consider the application of a primer such as the acrylic bonding agent **MAXBOND®** (Technical Bulletin N° 10) or the epoxy type **MAXEPOX® BOND** if required (Technical Bulletin N° 69).

#### Mixing

For applications manually or wet-process spraying, use 3 – 4 litres of clean water, free of contaminants per each 25 kg of material (14 % ± 2 % by weight). For dry-process

spraying, the water required is much less, approximately between 9 and 10%. In any case these quantities are only indicative and should be checked depending on the desired consistency and the existing ambient conditions.

#### **Application**

Spread manually by trowel or spray the mortar over the substrate. Do not exceed the maximum thickness of 5 cm per layer to prevent slumping. If the designated finish is by sponge, it must be done immediately after placing the last layer, whether by trowel or spray.

Applications by dry-process spray must be done by specialist applicators. **MAXRITE® -S** has been designed to be poured directly into the mixer. A specialist gunner will adjust the amount of water appropriately in order to obtain a compact lining, with uniform thickness and minimum rebound.

#### **Applications conditions**

Minimum ambient and surface temperature must be above 8 °C. Do not apply if lower temperatures are expected during the 24 hours following the repair. Do not apply on frozen or frosted surfaces.

#### **Curing**

Prevent fast drying by wind and high temperature. Provide usual steps to improve the curing such as water spray, covering with wet burlaps or plastic sheet, or spraying the curing agent **MAXCURE®** (Technical Bulletin N° 49). Protect from the rain and frost during the first 24 hours after the application.

#### **Cleaning**

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

#### **CONSUMPTION**

Approximate consumption of **MAXRITE® - S** are 1,7 kg/m<sup>2</sup> per mm. thickness of product. For dry-process spray, consider between 5% and 10% increase, allow for rebound loss. These estimative consumptions depend on substrate conditions and application method, a preliminary test on-site will determine consumption exactly.

#### **IMPORTANT INDICATIONS**

- For applications exposed to seawater, water or/ and ground with sulphates, use **MAXRITE® -S ANTISULFAT**.
- Do not use any **MAXRITE® -S** leftovers to prepare a new batch.
- Do not use mixing methods which cause violent mix and do not mix for prolonged periods.
- Do not exceed the thickness per layer in application.
- Do not exceed the amount of mixing water recommended.
- The setting time is measured at 20 °C, higher temperatures reduce setting time and lower temperatures delay setting time.
- For any other application not specified in this technical bulletin consult our Technical Department.

#### **PACKAGING**

**MAXRITE® - S** 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® - S** is non-toxic, but it is an abrasive compound by its composition. 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® -S** is available by request.

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

## TECHNICAL DATA

<b>Characteristics for the product</b>	
Appearance	Grey powder
Aggregate size (mm)	0 – 3
Apparent density in powder form (g/cm <sup>3</sup> )	1,3
<b>Characteristic for mixed and cured product</b>	
Apparent density of the mix (g/cm <sup>3</sup> )	2,1
Density of the hardened product (g/cm <sup>3</sup> )	2,0
Setting-time (hours, at 20 °C)	
Initial	3 – 4
Finish	7
Compressive strength (Mixed with 14%) (MPa)	
7 days	35,7
28 days	51,5
Flexural strength (Mixed with 14%) (MPa)	
7 days	5,1
28 days	7,6
Adhesion on concrete (MPa)	> 2,0
Capillarity, C <sub>m</sub> (kg/m <sup>2</sup> ·min <sup>0,5</sup> )	0,4
<b>Consumption / Thickness</b>	
Approximate consumption (kg/m <sup>2</sup> ·mm)*	1,7
Recommended thickness range per layer (cm)	0,5 – 5,0

\* This figure may vary depending on the application method and substrate 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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ISO 9001  
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