



# MAXSEAL<sup>®</sup> -M

## SINGLE COMPONENT CEMENT- BASED WATERPROOF COATING FOR CONCRETE AND MASONRY

### DESCRIPTION

**MAXSEAL<sup>®</sup> -M** is a single component mortar made of a mixture of cements, selected aggregates, special additives and synthetic resins which provides a high performance waterproof coating for concrete and masonry. It can be used for both positive and negative pressure.

### APPLICATION FIELDS

- As a waterproof coating for exterior walls.
- Basements subjected to water pressure.
- On foundations, to waterproof and protect concrete from water damage.
- As a waterproof coating for concrete blocks and prefabricated panels.
- As a decorative, waterproof finish for silos and cooling towers in thermal plants.
- Repairing and waterproofing irrigation channels.
- As a coating to waterproof dams and retaining walls.
- To protect and waterproof concrete in water treatment plants.
- Waterproofing tunnels and structures subjected to negative water pressure.
- Waterproofing swimming pools.
- Waterproofing and coating potable water tanks.

### ADVANTAGES

- The coating allows the substrate to breathe and thereby it does not form a water vapour barrier.
- It resists weathering and freeze/thaw cycles, longer lasting than paints and other coatings.

- For indoor applications, especially basements, galleries and tunnels, the coating resists hydrostatic pressure from ground.
- Withstands the corrosive effects of marine environment and atmospheric pollution.
- It forms a structurally inseparable unit with the base as it fills and seals all pores.
- Suitable for drinking water.
- No maintenance required.
- One-component product, only it requires water for mixing.
- Once it cures, can be painted over. It can also be covered with ceramic tiles as in swimming pools or decorative outdoor boards.
- A final coat **MAXSEAL<sup>®</sup> -M** may be applied for optimal waterproofing or as a decorative finish.
- Environmentally friendly.

### APPLICATION

#### Surface preparation

Surface must be clean, sound and free of old paints, existing coatings, cement slurries, efflorescence, greases, oils, demoulding agents, dust, gypsum, etc. Remove and clean by high water pressure, sand blasting or other suitable mechanical method, to provide an open texture surface.

All holes and cracks must be opened up at least 1,5 cm and then, patched with **MAXREST<sup>®</sup>** (Technical Bulletin n° 02). If water leaks are present, **MAXPLUG<sup>®</sup>** (Technical Bulletin n° 04) should be used. In case that superficial non-structural bars are present, these must be cut at least 2 cm and then should be patched with **MAXREST<sup>®</sup>** or **MAXPLUG<sup>®</sup>**.

Once substrate has been repaired, surface must be thoroughly saturated with clean water. Prior to application, allow excess water to drain away before applying **MAXSEAL® -M** but do not leave pooled or free-standing water on surface.

### Mixing

**MAXSEAL® -M** is ready to mix only with clean water. It requires between 6,5 and 7 litres of water per 25 kgs bag ( $27 \pm 1 \%$ ) to be mixed mechanically by a low speed drill (400 – 600 r.p.m.). Applications made at high temperatures ( $> 25 \text{ }^\circ\text{C}$ ) or by spray methods, can increase slightly the mixing water in order to achieve the right consistency and the workability required of the mortar. Small quantities can be mixed also by hand increasing the mixing time. Mix for 3 - 5 minutes until a homogeneous mortar free of lumps is achieved. Leave to rest 5 minutes and re-mix briefly 1 minute.

### Application

Prior to application, ensure to saturate the surface with water but leave no free-standing water. In order to fill and cover properly all pores and voids, **MAXSEAL® -M** should be applied by means of a fibre brush or a nylon fibre broom, such as **MAXBRUSH®** or **MAXBROOM®** respectively.

Apply **MAXSEAL® -M** in a thick layer, making up a homogeneous and continuous coating. Do not spread as if it were paint. Once **MAXSEAL® -M** has been spread on surface with the right thickness, it must not be brushed again, do not overwork the fresh coating. A second layer should be applied to completely cover the first layer with a waiting-time between layers of 8-16 hours. This second layer may be applied also by roller or trowel, to achieve decorative finishes.

**MAXSEAL® -M** can be also sprayed by wet-method. **DRIZORO®** can recommend the suitable type of spray pumps. If the sprayed application will be subject to water immersion and in order to ensure a complete coverage of the surface, it is recommended to slide the broom over the fresh layer which has just been sprayed.

### Cleaning

Clean with water all tools and equipments immediately after use. Once it hardens, product can only be removed by mechanical methods.

### Application temperature

Application temperature recommended is from 5 to 30 °C. For hot temperature applications ( $> 25 \text{ }^\circ\text{C}$ ), ensure to saturate the surface plenty of water before application.

Do not apply when temperature is below 5 °C and if such temperatures or rainfall is expected within 24 hours after application. Do not apply on frozen or frosted surfaces.

### Curing

Protect application at high temperatures ( $> 25 \text{ }^\circ\text{C}$ ) from a quick drying by strong winds or direct sunlight. If it is noticed that the drying process of **MAXSEAL® -M** is too quick, wet surface by spraying a fine mist of water the first hours of curing.

Curing time required to put **MAXSEAL® -M** into service or permanent water immersion, will depend on temperature and humidity conditions. In the range of 20 °C and 50 % R.H. will require a minimum of 10 days to ensure the product has cured enough to be in permanent water contact. Applications made at lower temperatures, with higher humidity and/or sites without ventilation will need longer curing periods.

### CONSUMPTION

Estimated consumption is between 1 and 1,5 kg/m<sup>2</sup> per coat (1 mm per coat approximately), for a total consumption of about 2,5 - 3 kg/m<sup>2</sup> in two coats. This approximate consumption may vary depending on porosity, surface conditions and application method. A preliminary test on-site will determine consumption exactly.

### IMPORTANT INDICATIONS

- Prior to application, ensure to achieve a full saturated surface of water, especially on porous and/or absorbent substrates. If air bubbles appear on surface of the freshly applied layer, it means that substrate has not been properly saturated with water.
- Do not add cements, additives, aggregates or other compounds to **MAXSEAL® -M**.

- Do not use **MAXSEAL® -M** in contact with very soft water, acid water and/or carbonic water. If sulphates are present in water, use the type **MAXSEAL® -M ANTISULFAT**.
- In case of doubt on the suitability of the water to put in contact with **MAXSEAL® -M** or further information, consult our Technical Department.

## PACKAGING AND COLOURS

**MAXSEAL® -M** is supplied in 25 kg bags and drums, and 5 kgs cans, and it is available in standard grey, white and pearl grey colour.

## STORAGE

Twelve months in bags and eighteen months in drums and cans, in its unopened packaging and stored in a covered dry place, protected from humidity and freezing, at temperature above 5 °C.

## SAFETY AND HEALTH

**MAXSEAL® -M** is non-toxic but it is an abrasive compound. Protective rubber gloves and goggles must be used to prepare the mix and apply it. In case of eye contact, rinse thoroughly with clean water but do not rub. In case of skin contact, wash affected area with soap and water. If irritation persists, seek medical attention.

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

## TECHNICAL DATA

<b>Product characteristics</b>	
<i>CE Marking, EN 1504-2</i>	
Description. Mortar for protection of concrete. Coating (C).	
Principles / Methods. Protection against ingress with coating (Principle 1-PI / 1.3), Moisture control with coating (Principle 2-MC / 2.2) and Increasing resistivity by limiting moisture content with coating (Principle 8-IR / 8.1)	
General appearance and colour	White/Grey powder
Maximum aggregate size, (mm)	0,63
Density for powder (g/cm <sup>3</sup> )	1,10 ± 0,10
Water or mixing liquid, (% by weight)	26-28
Density for fresh mortar, (g/cm <sup>3</sup> )	1,85 ± 0,10
<b>Application and curing conditions</b>	
Minimum application temperature for substrate and ambient, (°C)	> 5
Pot life at 20 °C & 50 % R.H., (min)	30 – 40
Minimum/maximum waiting time between coats at 20 °C & 50 % R.H., (h)	8 – 16 / 24
Drying time at 20 °C & 50 % R.H., (h)	24
Curing time at 20 °C & 50 % R.H., (d)	
- Mechanical load: covering with gravel or renders or plasters	3
- Permanent immersion	10
<b>Cured product characteristics</b>	
Density for cured mortar, (g/cm <sup>3</sup> )	2,00 ± 0,10
Depth of penetration of water under direct pressure, EN 12390-8 (kPa)	900
Depth of penetration of water under indirect pressure, EN 12390-8 (kPa)	300
Permeability to water vapour	Permeable
Resistance to freeze/thaw cycles	Resistant
Compressive strength at 28 days, EN 13892-2 (MPa)	> 35
Flexural strength at 28 days, EN 13892-2 (MPa)	> 8
Adhesion on concrete at 28 days, EN 1542 (MPa)	> 2
Suitability for contact with potable water	Suitable
<b>Consumption*</b>	
Consumption per coat/total application, (kg/m <sup>2</sup> )	1,0 - 1,5 / 2,0 - 3,0

## 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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BUREAU VERITAS  
Certification

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