



MAXSEAL® -M

SINGLE COMPONENT CEMENT- BASED (C) (E) WATERPROOF COATING FOR CONCRETE AND MASONRY

DESCRIPTION

MAXSEAL® -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

- Waterproofing and protection of structures for water retention: dams, channels, pipes, swimming pools, tanks, fountains, etc.
- Waterproofing and coating potable water tanks.
- Waterproofing and protection inside tunnels, galleries, basements, elevator shafts and, in general, buried structures subjected to indirect hydrostatic pressure conditions.
- Waterproofing and protection of concrete in water treatment plants: water processing units, setting tanks, etc.
- Waterproofing and protection from the outside against aggressive water and/or ground salts in foundations, retaining walls and, in general, structures below the water table, subjected to indirect and/or direct pressure.
- Waterproofing and protection against weathering, carbonation process, freeze/thaw cycles, de-icing salts and chloride attack on concrete, mortar and masonry in buildings, civil, hydraulic, and industrial works.
- Waterproofing of bathrooms, changing rooms, kitchens and other indoor wet areas in hotels, residential buildings, offices, health centres, etc.
- As a waterproof coating for exterior walls, concrete blocks and prefabricated panels.
- As a decorative, waterproof finish for silos and cooling towers in thermal plants.

ADVANTAGES

- Excellent waterproofing properties. Withstands both high positive and negative hydrostatic pressures.
- Permeable to water vapour, allows the substrate to breathe and thereby it does not form a water vapour barrier.
- Applicable on wet substrates.
- One-component product, only it requires water for mixing.
- Suitable for use in contact with drinking water. Non-toxic and chloride-free.
- It resists weathering and freeze/thaw cycles, longer lasting than paints and other coatings.
- Excellent adhesion to substrates, no primer/bonding agent required. It becomes part of substrate by filling and sealing the pores.
- High durability, no maintenance required.
- Resistant to aggressive media; marine environment, air pollution, etc.
- UV resistant.
- Once cured, it can be coated with protective mortars/decorative finish such as; **CONCRESEAL® PLASTERING** (Technical Bulletin No. 06) or with ceramics, mosaic tiles, stone, etc., with adhesives such as **MAXKOLA® FLEX** (Technical Bulletin No. 81) in swimming pools, decorative murals, kitchens, bathrooms, etc.
- Easy to apply by brush, broom, roller, or spraying means.
- Environmentally friendly: cement-based product and solvent-free formula.

APPLICATION

Surface preparation

Surface to be waterproofed must be solid, sound, rough, and without poorly adhered parts, superficial grouts and as uniform as possible. Likewise, it must be clean, free of paints, efflorescence, loose particles, greases, release oils, dust, plaster, etc., or

other substances that could affect the adhesion of the product.

If the surface has previously been coated with lime or acrylic treatments, etc., these must be removed, leaving only the remains strongly adhered. For cleaning and preparing the substrate, preferably in smooth and/or poorly absorbent ones, use sandblasting or high-pressure water to provide an open texture surface. Aggressive mechanical means are not advisable.

Before the application of **MAXSEAL®**, all holes and cracks must be opened at least 2,0 cm and then, patched with **MAXREST®** (Technical Bulletin No. 02). If water leaks are present, **MAXPLUG®** (Technical Bulletin No. 04) should be used. Reinforcement bars and other metal elements exposed during the substrate preparation must be cleaned and passivated with **MAXREST® PASSIVE** (Technical Bulletin No. 12), while surface and non-structural irons must be cut to a depth of 2 cm and subsequently covered with a suitable structural repair mortar.

To minimise the any possible damage caused by the crystallisation of salts from the substrate, apply an anti-efflorescence treatment such as **MAXCLEAR® SULFALT** (Technical Bulletin No. 163).

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 ± 1 %) to be mixed mechanically by a low-speed drill (400-600 rpm). Mix for 2-3 minutes until a homogeneous mortar free of lumps is achieved. Leave to rest 5 minutes and re-mix briefly 1 minute.

Applications made at high temperatures ($>25^{\circ}\text{C}$) 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.

Application

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. Apply two coats in perpendicular direction of 1,0 to 1,5 kg/m² per coat, i.e. a total consumption of 2,0 to 3,0 kg/m², making sure that the thickness per coat is of the order of 1 mm. 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 12-16 hours minimum and 24 hours maximum. 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. In applications to be covered with mortar or ceramic tiles, apply the second coat horizontally. In pipes, apply the second coat in the direction of flow to facilitate water circulation.

Application conditions

Do not apply **MAXSEAL® -M** if rain, and/or water contact, humidity dew, etc. is expected within 24 h after the application. The optimum temperature range for application is from 10°C to 30°C . Do not apply **MAXSEAL® -M** below 5°C or if such temperatures are expected within 24 h after application. Do not apply the coating on frozen or frosted surfaces. For applications at hot temperatures, strong wind and/or low relative humidity, dampen the substrate thoroughly with water. Avoid direct exposure for mortar to the sun in extreme heat conditions.

Curing

Protect application at hot temperatures from a quick drying by high 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 or using wet burlap or polyethylene sheets for the first 24 hours of curing.

MAXSEAL® -M can be covered with ceramic tile, plaster, or earth/gravel within 3 days of application. Allow a minimum cure of 10 days (20°C and 50 % R.H.) before putting it to permanent immersion conditions. Applications at lower temperatures with higher humidity and/or sites without ventilation will need longer curing periods. Once **MAXSEAL® -M** has cured and before putting into permanent contact with water, pre-wash the surface with a water jet.

Cleaning

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

CONSUMPTION

Estimated consumption is between 1,0 and 1,5 kg/m² per coat (1 mm per coat approximately), for a total consumption of about 2,0-3,0 kg/m² 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

- Do not add cements, additives, aggregates or other compounds to **MAXSEAL® -M**.
- Use the recommended mixing water ratios.
- Observe the minimum and maximum recommended consumptions.
- To recover the workability of the material, proceed to remix it but in no case add more water. Do not knead more material than can be applied in 20-30 minutes.
- Do not apply to water-repellent substrates, bituminous materials, plasters, or paints.
- 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 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 twenty-four 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.

For further information, Safety Data Sheet of **MAXSEAL® -M** is available by request.

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

TECHNICAL DATA

Product characteristics	
<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 ³)	1,10 ± 0,10
Water or mixing liquid, (% by weight)	26-28
Density for fresh mortar, (g/cm ³)	1,85 ± 0,10
Density for cured mortar, (g/cm ³)	2,00 ± 0,10
Application and curing conditions	
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)	12 – 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
Cured product characteristics	
Waterproofing maximum positive/direct water pressure, EN 12390-8 (bar)	9
Waterproofing maximum negative/indirect water pressure, EN 12390-8 (bar)	3
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 European Directive 2020/ 2184 and Spanish RD 03/ 2023	Approved
Suitability for contact with potable water British Standards BS-6920	Approved
Consumption*	
Consumption per coat/total application, (kg/m ²)	1,0 - 1,5 / 2,0 - 3,0

* Consumption may vary depending on the texture, porosity, and conditions of the substrate, as well as the method of application. Perform an on-site test to find out its exact value.

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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