DRIZORO® Construction Products

MAXSEAL® FLEX-M

CE

ONE-COMPONENT FLEXIBLE WATERPROOF COATING AGAINST POSITIVE AND NEGATIVE PRESSURE FOR CONCRETE AND MASONRY

DESCRIPTION

MAXSEAL® FLEX-M is a one-component cement-based mortar. Once mixed only with water, it provides a high-performance flexible coating, for waterproofing and protection of concrete against positive and negative pressure.

APPLICATION FIELDS

- Waterproofing and protection of water retaining structures, such as potable water tanks, reservoirs, dams, water channels, fountains and swimming pools.
- Waterproofing of below-grade structures like basements, retaining walls, foundations, tunnels, galleries subject to high negative water pressure.
- Waterproofing/protection of concrete in waste water treatment plants, settlement tanks, etc.
- Waterproofing and protection against Insect and TERMITE ingress and of concrete structures against carbonation, and marine environment, such as civil works, bridges, architectural buildings, residential facades, etc.
- Waterproofing and protection of concrete against soil salts and aggressive ground water, in underground jobs, foundations, etc.
- Waterproofing roofs, terraces, balconies, etc.
- Waterproofing of window boxes, gardens and other surfaces subject to root penetration.
- Internal waterproofing of bathrooms, kitchens and other wet areas in hotels, hospitals, offices, residential buildings, etc.

ADVANTAGES

Protection against Insect and TERMITE ingress.

- Provides a fully-flexible coating which ensures complete waterproofing even in the most severe conditions, or high negative water pressure.
- Good crack-bridging capability (> 0,5 mm).
- Acts as an anti-fracture membrane between the substrate and other finishing coats if applied.
- Excellent barrier effect against CO_2 and chlorine (Cl-), thereby prevents carbonation and corrosion of steel rebars.
- Allows water vapour diffusion and the breathability of the concrete.
- Resistant to abrasion and UV rays.
- Withstands atmospheric pollution, corrosive effects of salt water or de-icing salts.
- Excellent adhesion. Do not require primer and can be applied on wet surfaces.
- Non-toxic, suitable for contact with potable water.
- Longer lasting that other coatings, avoiding maintenance costs.
- Environmentally friendly and suitable for application in poor ventilation areas.

At shore "A" hardness 85(23mpa) considered insect and TERMITE proof.

APPLICATION INSTRUCTION

Surface preparation

The surface to be coated must be sound, clean, and free of all traces of paint, dust, grease, efflorescence, loose particles, gypsum, plaster and mould release compounds. Recommended cleaning methods are high pressure water cleaning and sandblasting. Other percussive methods are not recommended.

Holes, voids, honeycombs and cracks, once opened to a minimum 2 cm in depth, should be repair with structural repair mortar ***MAXREST®***
Exposed steel bars must be cleaned and patched with ***MAXREST®*** (Technical Bulletin no. 4) with 1 cm. minimum thickness. If steel bar is corroded, treat with the oxide converter ***MAXREST® PASSIVE***
(Technical Bulletin no. 12).

Thoroughly wash down and saturate the substrate with plenty of water. Remove all free standing water before application.

Mixing

A 22 kg bag of ***MAXSEAL® FLEX-M*** requires from 4,4 – 5,3 litres of water (22 ± 2 %), depending on application temperature and substrate conditions. Pour the required amount of water in a clean container, slowly add ***MAXSEAL® FLEX-M***, mixing by a slow speed electric drill (400-600 rpm) fitted with a disc mixer for about 2-3 minutes until achieving a lump-free and homogeneous. Allow the mixture to rest for 2 to 3 minutes to fully wet out all the powder, and then remix briefly before applying.

To keep the workability of the fresh mortar, remix again briefly, but do not add more water. Do not mix product that cannot be applied within 20 – 30 minutes.

APPLICATION INSTRUCTION

IMPORTANT NOTICE:

Surface preparation: The surface to be coated must be sound, clean, free of traces of paint, loose particles, dust, grease, mould, release compounds, gypsum, efflorescence.

IT IS THE APPLICATORS RESPONSIBILITY to determine the presence of (salt) **efflorescence** prior to application. Remove efflorescence using EFFLORESCENCE RID and apply SEALTIGHT to the affected areas to block salt from penetrating.

IMPORTANT: Maxseal Flex-M can only be applied to a wet surface, ***NO*** other primer or ***OTHER*** product is required **except** in areas where salt treatment has been carried out. Apply Maxseal Flex in these areas while surface is still wet with **SEALTIGHT**.

Any damage or concrete defect should be repaired in advance. Patch all holes, voids and honeycombs. Open cracks to approximately 2 cm. in depths.

Application

Apply ***MAXSEAL® FLEX-M*** by a fibre type brush ***MAXBRUSH*** or broom ***MAXBROOM***, spreading a homogeneous and continuous coating of 1 mm approximately. Once applied, do not overwork the surface and do not apply as if it was paint.

Apply two coats in perpendicular direction, with 1 – 1,5 kg/m^2 per coat, for a total consumption of 2 – 3 kg/m^2. Allow a drying time of minimum 6 hours and maximum of 24 hours between coats. Second coat can be rolled over for a textured finish.

For large areas ***MAXSEAL® FLEX-M*** can also be sprayed, the recommended nozzle size 3-4 mm and spraying pressure between 3,5 and 5,0 bar. When sprayed, it is recommended to comb the fresh coat with a broom to make sure that the whole surface is covered homogeneously.

On fissures, concrete joints, corners and cracks, once repaired, apply a first coat of ***MAXSEAL® FLEX-M*** at 1,0 kg/m2 and while it is still fresh, place ***MAX MESH*** either 50mm or 200mm strip. Then apply a second coat of ***MAXSEAL® FLEX-M*** at 1,0 kg/m2/min.

Curing

Curing time for putting into service and water immersion is 5 days, at 20ºC and 50% R.H

Applications at lower temperatures or higher R.H. will increase curing time.

Once ***MAXSEAL® FLEX-M*** is cured, wash surface with water pressure before water immersion service,

Cleaning

All tools must be cleaned with water after use. Once it cures can only be removed by mechanical methods.

CONSUMPTION: For extreme situations Requiring full 11 bar positive and 5 bar Negative waterproofing

Apply two coats, using 1–1,5 kg/m^2 of ***MAXSEAL FLEX-M*** per coat and allow a minimum of 6 hours and a maximum of 24 hours between applications. Prior to application thoroughly wash down and saturate the surface, but do not leave free standing water. Thickness per layer should be 1 mm. approximately, **it is very important to avoid very thin or, thick application. WET surface again prior to application of second coat.**

For all other waterproofing **both positive/negative an application achieving a yield of 2 coats finish at 11m2 (22 Kg) is recommended.**

MAXSEAL® FLEX-M is applied in two coats of 1 –1,5 kg/m^2 per coat, for a total consumption of 2 – 3 kg/m^2 in two coats. Minimum 5 days curing before permanent contact with water depending on porosity, substrate conditions and application method, a preliminary test on-site will determine consumption exactly.

PACKAGING

MAXSEAL® FLEX-M is supplied in 22 kg bags, available in grey and white colours.

STORAGE

24 months in its original unopened packaging, in a dry and covered place protected from humidity, frost and direct sunlight, at temperatures above 5 ºC.

IMPORTANT CAUTIONS:

- Do not add cement, admixtures, sand or any other compound.
- In case of doubt related to the kind of water to be in contact with ***MAXSEAL® FLEX-M*** or other uses not specified on this Technical Bulletin, consult Technical Department.

SAFETY AND HEALTH

MAXSEAL® FLEX-M is an abrasive compound so protective rubber gloves and goggles must be used during application. In case of eye contact, rinse thoroughly with clean water, but do not rub. In case of skin contact, wash affected areas with soap and water. If irritation continues, seek medical attention.

MAXSEAL® FLEX-M

TECHNICAL DATA

Product characteristics	
CE Marking, EN 1504-2 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 / 8.2)	
General appearance and colour	White or grey powder
Density, (g/cm^3)	1,12 ± 0,1
Mixing water, (%)	20-24
Application and curing conditions	
Minimum application temperature for substrate and ambient, (ºC)	> 5
Pot life at 20 ºC & 50 % R.H., (min)	20 - 30
Minimum / Maximum drying-time between coats at 20 ºC & 50 % R.H., (h)	6 / 24
Curing time at 20 ºC & 50 % R.H.(d)r: - Mechanical load: covering with gravel, renders, plasters, tiles - Water immersion	 3 5
Cured product characteristics	
Waterproofing maximum positive/direct water pressure, EN 12390-8 (ATM)	11
Waterproofing maximum negative/indirect water pressure, EN 12390-8 (ATM)	5
Permeability to water vapour, EN ISO 7783-1/-2. Classification V (g/m^2·day) / S_D (m)	Class I: Permeable to water vapour 13,7 / 1,6
Permeability to water and capillary absorption, EN 1062-3. w (kg/m^2·h^{0,5})	0,005
Permeability to CO_2, EN 1062-6. S_D (m)	64
Crack-bridging capability, UNE-EN 1062-7	Class A3 (>0,5 mm)
Adhesion on concrete at 28 days, EN 1542 (MPa)	3,4
Suitability for contact with potable water	Suitable
Consumption*	
Consumption per coat/total application, (kg/m^2)	1 - 1,5 / 2 - 3

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

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