



MONOFLEX

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

DESCRIPTION

MONOFLEX 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 and protection of concrete in waste water treatment plants, settlement tanks, etc.
- Waterproofing and protection of concrete structures against carbonation, freeze-thaw cycles, de-icing salts 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 of 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

- Provides a fully-flexible coating which ensures complete waterproofing even in the most severe conditions, as high negative water pressure.

- Good crack-bridging capability of the concrete (> 0,5 mm).
- Acts as an anti-fracture membrane between the substrate and other finishing coats if applied.
- Excellent barrier effect against CO₂ 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, and the freeze/thaw cycles.
- Excellent adhesion. Does not require primer and can be applied on wet surfaces.
- Non-toxic, suitable for contact with potable water.
- Longer lasting than other coatings, avoiding maintenance costs.
- Environmentally friendly and suitable for application in poor ventilation areas.
- Withstands the root penetration.

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. Exposed steel bars must be cleaned and patched.

Thoroughly wash down and saturate plenty of water the surface, but do not leave free standing water before application.

Mixing

A 20 kg bag of MONOFLEX requires from 5.7 – 6.6 litres of water (26 - 30 %), depending on application temperature and substrate conditions. Pour the required amount of water in a clean container and then slowly add MONOFLEX 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

Apply MONOFLEX by a fibre type brush or broom, 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/m² per coat, for a total consumption of 2 – 3 kg/m². Allow a drying time of minimum 6 hours and maximum of 24 hours between coats. Second coat can be applied by roller for a textured finish.

For large areas MONOFLEX can also be sprayed, being 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 and sealed, apply a first coat of MONOFLEX with 1,5 kg/m² and while it is still fresh, place a fibre glass mesh with at least 20 cm wide of strip. Then apply a second coat of MONOFLEX with 1,5 kg/m².

Application conditions

Do not apply below 5 °C or if lower temperatures are expected within 24 hours after application. Do not apply on frozen surfaces or if rain is expected 24 hours after application.

Avoid a quick drying by strong wind and/or hot temperatures, keeping its moisture curing at least the first 24 hours, by protecting with wet burlaps and plastic sheets.

Curing

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

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

Once MONOFLEX 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

MONOFLEX is applied in two coats of 1 – 1,5 kg/m² per coat, for a total consumption of 2 – 3 kg/m² in two coats. These figures may vary depending on porosity, substrate conditions and application method, a preliminary test on-site will determine consumption exactly.

PACKAGING

MONOFLEX is supplied in 20 kg bags, available in grey and white colours.

STORAGE

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

IMPORTANT INDICATIONS

- 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 MONOFLEX or other uses not specified on this Technical Bulletin, consult Technical Department.

SAFETY AND HEALTH

MONOFLEX 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.

Safety Data Sheet of MONOFLEX 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 / 8.2)	
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, (°C)	> 5
Pot life at 20 °C & 50 % R.H., (min)	20 - 30
Minimum / Maximum drying-time between coats at 20 °C & 50 % R.H., (h)	6 / 24
Curing time at 20 °C & 50 % R.H.(d):	
- Mechanical load: covering with gravel, renders, plasters, tiles	3
- Water immersion	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) / SD (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

GUARANTEE

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Manufactured Exclusively for:

All Aspects Insulation Materials, P.O.Box: 39613, Sharjah, UAE, T: +971 6 5569913, F: +971 6 5569914

E: info@allaspects-emirates.com, W: www.allaspects.ae