



MAXSEAL[®] FLEX



FLEXIBLE WATERPROOF COATING AGAINST POSITIVE AND NEGATIVE PRESSURE FOR CONCRETE AND MASONRY



DESCRIPTION

MAXSEAL[®] FLEX is a two-component product. Component A is a water-based special acrylic resin and component B, is a mortar based on a mixture of special cements, additives and well-graded aggregates.

Once applied and cured, **MAXSEAL[®] FLEX** provides a non-toxic, flexible and waterproof coating with very high adhesion on those common substrates in construction such as concrete, natural and artificial stone, traditional mortar plasters, bricks, concrete blocks, etc.

APPLICATION FIELDS

- Waterproofing and protection of water retaining structures, such as drinking water tanks, reservoirs, water mains and swimming pools.
- Waterproofing of below-grade structures like basements, retaining walls, foundations, tunnels, galleries subjected to both positive or negative high water pressure.
- Internal and external waterproofing and protection of new and old buildings, façades against dampness, rain, pollution and aggressive environments.
- Waterproofing and protection of concrete against carbonation, freeze-thaw cycles, de-icing salts in highways and chlorine penetration in public works, irrigation channels, dams,

retaining walls and water treatment plants, bridges, etc.

- Tile fixing and waterproofing under tile and pavement in terraces, balconies, bathrooms, kitchens and other wet rooms in hotels, hospitals, offices and residential buildings, in indoor or outdoor use.
- Waterproofing of window boxes, gardens and other surfaces subject to root penetration.

ADVANTAGES

- Provides a fully-flexible coating which ensures complete waterproofing even in the most severe conditions, as high negative water pressure.
- Covers shrinkage and hairline cracks of the concrete.
- Acts as an anti-fracture membrane between the substrate and other finishing coats if applied.
- Excellent protection for concrete, being both a CO₂ and chlorine (Cl-) barrier and thereby preventing carbonation and electrochemical corrosion.
- Permeable to water vapour, allows the substrate to breathe.
- Resistant to abrasion and UV rays.
- Withstands atmospheric pollution, corrosive effects of salt water and de-icing salts and freeze/thaw cycles.
- Resists hydrostatic negative pressure from ground water when used for underground interior applications.
- Excellent adhesion and easy to use. Does not require bonding agents and can be applied on wet surfaces.
- Non-toxic and chloride-free. Suitable for contact with potable water.
- Longer lasting than other coatings, avoiding maintenance costs.
- Environmentally friendly.
- Withstands the root penetration, when properly reinforced with fiber glass mesh.

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.

Any damage or concrete defect should be repaired in advance. Patch all holes, voids and honeycombs. Cracks opened to approximately 2 cm in depth. Exposed steel bars must be cleaned and patched with **MAXREST**® (Technical Bulletin n°.: 4) up to 1 cm. minimum thickness. If it is needed, treat steel bars with the oxide converter **MAXREST**® **PASSIVE** (Technical Bulletin n°.: 12).

Mixing

MAXSEAL® **FLEX** is supplied as two pre-weighed components. Pour the resin, component A, into a clean container and add the powder gradually, component B, while mixing with a low speed mixing drill (400 – 600 rpm). Mix until a homogeneous mixture free of lumps is achieved. Do not add water and keep liquid/powder ratio as per the packaging supplied. Depending on existing temperature and R.H. climate conditions, pot life expected will be between 30 minutes and one hour.

Application

MAXSEAL® **FLEX** is applied with a fibre type brush or broom such as **MAXBRUSH**® or **MAXBROOM**® respectively, or by trowel when a smooth finish is required.

For large areas **MAXSEAL**® **FLEX** 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 finish the fresh coat with a broom to make sure that the whole surface is covered completely.

Apply two coats, using 1 – 1,5 kg/m² of **MAXSEAL**® **FLEX** per coat and allow a minimum of 16 hours and a maximum of 3 days 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, thereby being important to avoid very thin application or, on the opposite, a much thicker one.

In those areas such as fissures, concrete joints



and active cracks, once repaired and sealed, **MAXSEAL® FLEX** will be applied with a fibre glass mesh of 40-60 g/m². Place the mesh on a first coat of **MAXSEAL® FLEX**, with at least 20 cm wide of strip, and then apply a second coat of **MAXSEAL® FLEX**.

Application conditions

Optimum application temperature is between 10 – 25 °C. Do not apply below 5 °C or if lower temperatures are expected within the following 24 hours after application. Do not apply on frozen surfaces or if rain is expected 24 hours after application.

Protect against quick drying by winds and direct sunlight with high temperatures, by fog-spraying with water for two hours after application.

Curing

Curing time required to put the product into service or to immerse it in water will depend on temperature and relative humidity conditions on site. Conditions in the range of 20°C and 50% R.H will require a minimum of 14 days to ensure that the product has cured enough to be in permanent contact with water. Applications made at lower temperatures or sites without ventilation will require longer curing periods. After curing, wash the surface of **MAXSEAL® FLEX** with water before putting into service in permanent contact with water.

Cleaning

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

CONSUMPTION

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

PACKAGING

MAXSEAL® FLEX is supplied in grey and white colour, both available in standard and smooth textures. Pigmented version **MAXSEAL® FLEX DECOR** is available in light colours by especial request.

Pre-weighed sets of 35 kg (10 kg component A + 25 kg component B) and 7 kg (2 kg component A + 5 kg component B) for standard texture and pre-weighed sets of 32 kg (10 kg component A + 22 kg component B) and 7 kg (2 kg component A + 5 kg component B) for smooth texture.

COMPONENTS	Standard texture		Smooth texture	
	Set 35 kg	Set 7 kg	Set 32 kg	Set 7 kg
Component A	10 kg	2 kg	10 kg	2 kg
Component B	25 kg	5 kg	22 kg	5 kg

STORAGE

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

IMPORTANT INDICATIONS

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

SAFETY AND HEALTH

Both components are non-toxic by themselves, but powder component is an abrasive compound. Avoid eye and skin contact for both components. Protective rubber gloves and safety goggles must be used to mix and apply them. In case of eye contact, rinse thoroughly with clean water but do not rub. In case of skin contact, wash affected areas with water and soap. If irritation persists, seek medical assistance.

Safety Data Sheet of **MAXSEAL® FLEX** 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	
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 for component A	Milky white liquid
General appearance and colour for component B	White/Grey powder
Density for component A, (g/cm ³)	1,03 ± 0,05
Density for component B, (g/cm ³)	1,35 ± 0,10
Density for fresh mortar, (g/cm ³)	1,56 ± 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, renders, plasters, tiles	7
- Permanent immersion	14
Cured product characteristics	
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, EN ISO 7783-1/-2. Classification V (g/m ² ·day) / S _D (m)	Class I: Permeable to water vapour 6,37 / 3,29
Permeability to water and capillary absorption, EN 1062-3. w (kg/m ² ·h ^{0,5})	0,01
Permeability to CO ₂ , EN 1062-6. S _D (m)	346
Resistance to freeze/thaw cycles, SS 137244. Scaling (kg/m ²)	Very good resistance / 0,03
Resistance to sulphates, ASTM C-1012. Classification y expansion (%)	High resistance / 0,01
Resistance to diffusion of chloride ions, ASTM C-1202. Classification	Very low ingress
Tensile strength, UNE 53510 (MPa)	1,3 ± 0,1
Elongation at break, UNE 53510 (%)	59 ± 5
Bending test on 8 mm reinforcement, ASTM A 615. Elongation (%) / Result	60 / Without fissures
Crack-bridging ability, UNE 104309 (mm)	
- Progressive method at 23 °C / after 12 h at -5 °C	3,3 / 2,7
- Instant method at 23 °C / after 12 h at -5 °C	4,5 / 3,3
Adhesion on concrete/MAXSEAL FLEX at 28 days, EN 1542 (MPa)	2,0 / 1,8
Abrasion resistance (Taber test), ASTM D-4060.	500 Cycles 1.000 Cycles
Wearing index (Abrading wheel: CS-17 & Load: 1 kg)	0,26 0,16
Suitability for contact with potable water, BS 6920	Suitable
Consumption*	
Consumption per coat/total application, (kg/m ²)	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.



DRIZORO, S.A.U.

C/ Primavera 50-52 Parque Industrial Las Monjas
28850 TORREJON DE ARDOZ – MADRID (SPAIN)
Tel. 91 676 66 76 - 91 677 61 75 Fax. 91 675 78 13
e-mail: info@drizoro.com Web site: drizoro.com

