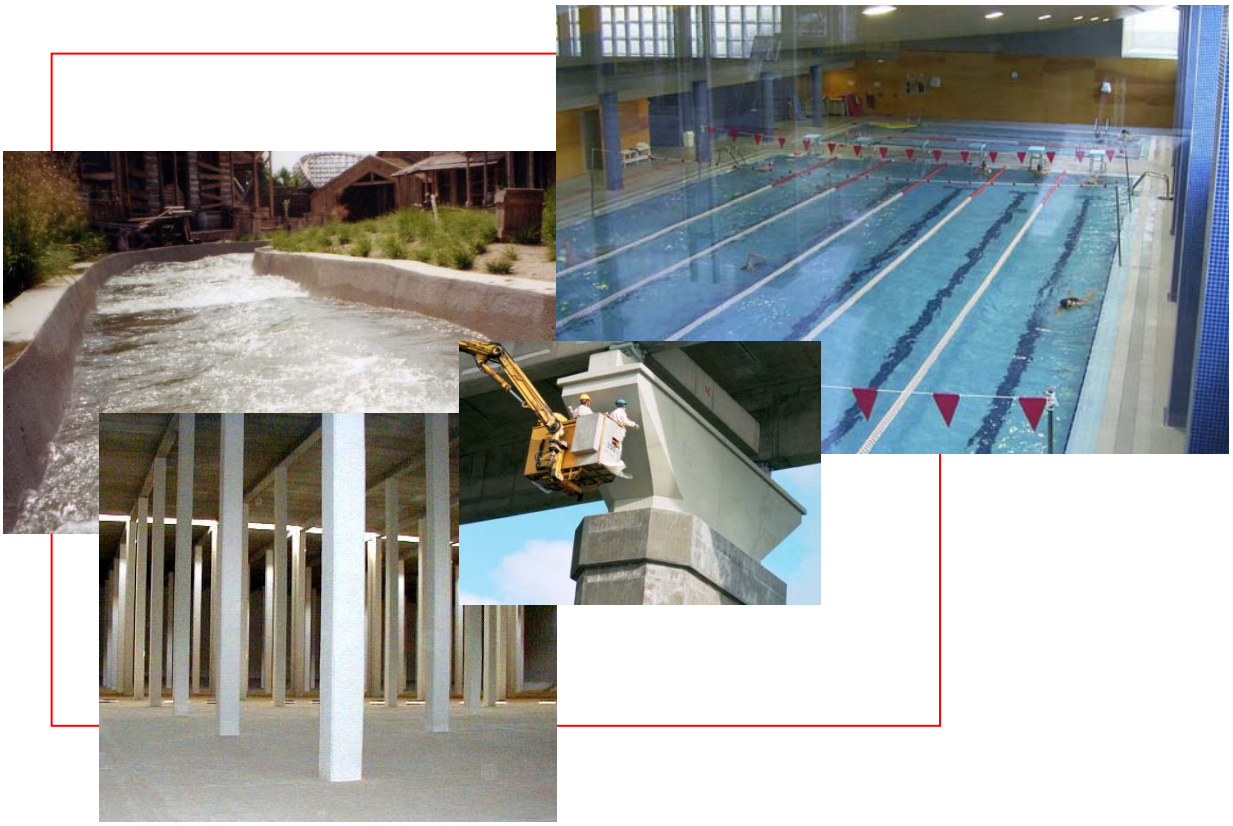
DRIZORO® Construction Products

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 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- concrete, natural and artificial stone, traditional mortar plasters, bricks, concrete blocks, Hebel 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 environment.
- Waterproofing and protection of concrete against carbonation, and chlorine penetration in public works, irrigation channels, dams, retaining walls and water treatment plants, bridges, etc.
- Tile fixing and waterproofing of roofs under tiles 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. Water retention structures.

ADVANTAGES

- Provides a fully flexible coating which ensures complete waterproofing in the most severe conditions, even in high negative or positive water pressure.
- Covers shrinkage and hairline cracks in the concrete.
- Acts as an anti-fracture membrane between the substrate and other finishing coats.
- Excellent protection for concrete, being both a CO_2an chlorine (Cl-) barrier and thereby preventing carbonation and electrochemical corrosion.
- Permeable to water vapour, allows the substrate to breathe.
- Resistant to abrasion and is UV stable.
- With stands atmospheric pollution, corrosive effects of salt water and freeze/thaw cycles.
- Resists hydrostatic negative and positive pressure from ground water when used for interior underground applications.
- Excellent adhesion and easy to use. Does not require bonding agents and can only 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 root penetration, when properly reinforced with fibre 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, IT IS THE RESPONSIBLITY** of the applicator to determine whether a structure contains any form of efflorescence **PRIOR TO APPLICATION** . Any traces of efflorescence in negative waterproofing should be removed with **-Saltrid** also loose particles, gypsum, plaster and mould release compounds. Recommended cleaning methods are high pressure water cleaning and sandblasting. Other percussion methods are not recommended.

Any damage or concrete defect should be repaired in advance. Patch all holes, voids and honeycombs. Open cracks to approximately 2 cm. in depths. Exposed steel bars must be cleaned and patched with ***MAXREST*** (Technical Bulletin nº 4) up to 1 cm. minimum thickness. If it is needed, treat steel bars with the oxide converter ***MAXREST PASSIVE*** (Technical Bulletin nº 12).

Mixing.

MAXSEAL FLEX is supplied as two pre-weighed components. Pour the resin, component A, into a clean container and add the powder,component B, gradually, 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 package supplied. Depending on existing temperature and R.H. climate conditions, pot life expectancy 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, recommended nozzle size is 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/m^2 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, **it is very important to avoid very thin or, thick application.**
In those areas such as fissures, concrete joints and active cracks should be sealed using **Maxjoint Elastic**, once repaired and sealed, ***MAXSEAL FLEX*** should be applied with a fibre glass mesh of 40-60 g/m^2. 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 ºC. Do not apply below 5 ºC 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 20ºC 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 potable water.

Cleaning:

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

CONSUMPTION

MAXSEAL FLEX is applied in two coats of 1 – 1,5 kg/m^2 approximately per coat, achieving a total consumption of 2 – 3 kg/m^2.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, can be tinted. Pigmented version ***MAXSEAL FLEX DECOR*** is available in light colours by special request.

Pre-weighed sets of 35 kg (10 kg component A + 25 kg component B) and 14 kg Handi-pack, includes brush and stirrer (4 kg component A + 10 kg component B) and 7 kg (2 kg component A + 5 kg component B).

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 at temperatures above 5 ºC protected from humidity and frost.

CAUTION:

- **Do not add** water, cement, admixtures, sand or any other compound.
- In case of doubt related to the kind of water likely 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.

Material Safety Data Sheet on ***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

Appearance of component A/ component B	Milky white liquid / Grey or white powder	
Density of liquid component A	1,03 ± 0,05 g/cm^3	
Density of powder component B	1,35 ± 0,05 g/cm^3	
Density (A) + (B)	1,56 ± 0,05 g/cm^3	
Waterproofing against positive water pressure	> 9 kg/cm^2 (Maximum pressure of equipment)	
Waterproofing against negative water pressure	4 kg/cm^2	
Resistance to freeze – thaw cycles and salts After 56 freeze – thaw cycles in the presence of salt (3% NaCl) . Swedish Standard SS 137242	Complies requirements of Bridge Protection Code 1994 and 2004 from Sweden. Scaling < 0.03 kg/m2	
Adhesion to different substrates	**N/mm^2**	**Breakage**
Concrete (ASTM D-4541)	2,0	Mortar
Previous MAXSEAL FLEX (ASTM D-4541)	1,8	Mortar
Steel panel. HKHA MTS 97/99	1,73	Mortar
Suitability for contact with drinking water	Listed in the Water Regulations Advisory Scheme (WRAS) for use in contact with potable water, tested under British Standard 6920. Meets requirements under R.D. 140/2003	
Resistance to CO2 diffusion Prof. H. Klöpfer method	$d_{CO2} = 0,43 * 10^{-7}$ m/s R = 346 mts. (R>50 mts. by Prof. H. Klöpfer)	
Resistance to water vapour diffusion Swedish Standard SS 021582	$d_{H2O} = 0,131 * 10^{-4}$ m/s S = 1,9 mts., equivalent air barrier	
Bending test on a re-bar 8 mm. ASTM A 615	20% elongation without cracks	
Resistance to sulfates ASTM C1202	Classified as "High Resistance" Expansion 0,01% after 32 months	
Taber abrasion resistance Wheel CS17, load 1000 g. ASTM D4060	500 cycles = 0,26 1000 cycles = 0,16	
Elongation at break UNE 53510-01	59 ± 5 %	

GUARANTEE

ISO 9.001 & ISO 14.001

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. ***DRIZORO*** reserves the right to introduce changes without prior price. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company´s responsibility unless authorised by us. ***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 determine the real data, a test on the jobsite must be done, and it will be the clients 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 bulletin 2905.

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