



# MAXSEAL®

## FLEX EXPRESS



### FLEXIBLE CEMENT MORTAR FOR VERY FAST WATERPROOFING WORKS



#### DESCRIPTION

**MAXSEAL® FLEX EXPRESS** is a two-component flexible waterproofing mortar, based on liquid acrylic resins (Component A) and special cements, additives and well-graded aggregates (Component B), with very fast setting-time suitable for urgent waterproofing works.

Its very fast setting-time makes it the ideal product for waterproofing with sudden rainfalls, short-time curing for flooding tests, splash zone areas or tiling with ceramic after 2 hours drying-time.

#### APPLICATION FIELDS

- Fast waterproofing in hydraulic works, swimming-pools, water tanks, fountains and other water retaining structures.
- Urgent waterproofing of roofs, terraces, balconies, planters, green roofs and other outdoor areas, where risk of sudden rainfalls are expected.

- Fast indoor waterproofing of wet areas in bathrooms, changing rooms, kitchens, etc where a fast tiling or fast opening to traffic is required, combined with **MAXKOLA® -M EXPRESS**.
- Negative waterproofing of tunnels, galleries, basements, elevator pits, underground parking and other structures subject to negative pressure.
- Fast waterproofing and protection of surfaces exposed to aggressive water, marine water, and soil salts in marine structures, bridges, foundations, retaining walls, wastewater treatment plants, underground structures, pipelines, etc.

#### ADVANTAGES

- Allows tiling with adhesive mortars after 2 hours curing-time and/or opening to traffic at same day covering with **MAXKOLA® -M EXPRESS**.

- Provides a flexible waterproofing coat with crack-bridging capability.
- Resistant to abrasion and UV rays.
- Withstands and protect concrete against freeze/thaw cycles, atmospheric pollution, marine environment, corrosive effects of sea water, sewage water and de-icing salts.
- Allows water vapour diffusion, very good water vapour permeability.
- Suitable to be applied on wet substrates.
- Excellent adhesion on concrete, brick, tiles, stone, cement mortar, prefabricated block, etc. No primer or bonding agent is required.
- Withstands the root penetration, when properly reinforced with fiber glass mesh.
- Environmental friendly, solvent-free and suitable for working areas with bad ventilation.

## APPLICATION INSTRUCTION

### Surface preparation

Substrate must be structurally sound, firm, without cement laitance and as uniform as possible, and preferably with a slight roughness, i.e. open textured surface. Surface must be clean and free of efflorescence, loose particles, grease, oils, curing agents, form release agents, dust, organic growth or any other contaminants that may affect to adhesion. For cleaning and substrate preparation, preferably in case of smooth and/or poorly absorbent substrates, use sand blasting or high pressure water cleaning methods, not being desirable aggressive mechanical means.

Any damage or concrete defect, i.e. honeycombs, voids, and non-active cracks, once opened and routed to a minimum depth of 2 cm in depth, must be repaired with a suitable structural repair mortar such as **MAXREST®** (Technical Bulletin No. 4), or **MAXPLUG®** (Technical Bulletin No. 4) in case water is present. Exposed steel bars or other metal elements must be cleaned and passivated with **MAXREST® PASSIVE** (Technical Bulletin No. 12), while non-structural and surface iron elements must be cut to a depth of at least 2 cm and then covered with **MAXREST®**.

To reduce damages caused by salt crystallization from the substrate, apply previously by brush or roller the anti-efflorescence liquid **MAXCLEAR® SULFATE** (Technical Bulletin No. 163).

Once substrate has been prepared, and prior to **MAXSEAL® FLEX EXPRESS** application, saturate plenty of water the entire surface to be coated, avoiding the formation of puddles. Allow excess water to drain away, and then start the application once the surface acquires a matte appearance. If it gets dry, proceed to saturate it with water again.

Shorehardness of 83

\*DO NOT apply Maxsealflex over Polyurethane

## Mixing

**MAXSEAL® FLEX EXPRESS** is supplied as two pre-weighed components. Pour 3/4 parts of the liquid 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 for about 2 to 3 minutes until a homogeneous mixture free of lumps is achieved. Pour all the remaining liquid resin and mix until eliminate lumps. Do not add water and keep liquid/powder ratio as per the packaging supplied.

Depending on existing temperature, pot-life expected will be about 30 minutes. In order to keep the workability of the fresh mixture, remix it briefly again from time to time but never add more resin or water.

## Application

For the best coverage and thickness control **MAXSEAL® FLEX EXPRESS** is applied with a fibre type brush **MAXBRUSH** or fibre broom **MAXBROOM**. Apply two coats in perpendicular direction with a recommended consumption from 1,0 to 1,5 kg/m<sup>2</sup> per coat, for a total consumption from 2,0 to 3,0 kg/m<sup>2</sup>. Once spread the coating, do not over work it with the brush or broom.

Provide a continuous fresh coating with uniform thickness of 1,0-1,5 mm approximately, being important to avoid spreading it very thin like paint or as a thick coat higher than 1,5 mm as recommended.

Minimum waiting time between coats is at least 30-60 minutes and at most 24 hours. If a smooth surface is desired, the second coat can be pressed slightly with a metal trowel immediately while it is still fresh.

Critical points subject to movements such as cracks, cold joints, corners and other outstanding points, once repaired and sealed, are waterproofed by applying a first coat of **MAXSEAL® FLEX EXPRESS** with a consumption of 1,5 kg/m<sup>2</sup> and reinforced with the fibreglass mesh **DRIZORO® MESH-** (density about 58 g/m<sup>2</sup>), placing a strip width of not less than 20 cm width on to fresh coat. Finally, a second coat of **MAXSEAL® FLEX EXPRESS** is applied with a consumption of 1,5-2,0 kg/m<sup>2</sup>.

## Application conditions

Avoid application if rain is expected within the first 24 hours. The working temperature range is from 5°C to 40°C. Do not apply at substrate and/or ambient temperatures below 5°C or if lower temperatures are expected within 24 hours after application. Do not apply on frozen or flooded surfaces.

Applications at hot temperatures (> 30°C) exposed to direct sunlight and/or windy conditions, ensure surface is saturated plenty of water prior to application.

## Curing

**MAXSEAL® FLEX EXPRESS** can be covered with ceramic tiles, mortars or soil/gravels after 2 hours.

Curing-time before flooding tests or permanent water contact is 72 hours at 20°C. Applications made at lower temperatures or sites without ventilation will require longer curing time.

Before putting **MAXSEAL® FLEX EXPRESS** into permanent water immersion, wash surface plenty with water hose.

## Cleaning

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

## CONSUMPTION

Estimated consumption for **MAXSEAL® FLEX EXPRESS** is about 1,0-1,5 kg/m<sup>2</sup> per coat, for a total consumption of 2,0-3,0 kg/m<sup>2</sup> in two coats.

In case of reinforcing with glass fibre mesh **DRIZORO® MESH 58**, total consumption for two coats is about 3,5 kg/m<sup>2</sup>.

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

## PACKAGING

**MAXSEAL® FLEX EXPRESS** is supplied in two component pre-weighed set of 7 kg and 35 kg respectively. It is available in grey colour.

COMPONENTS	PACKAGING	
	Set 35 kg	Set 7 kg
Component A	10 kg can	2 kg can
Component B	25 kg sack	5 kg can

## CAUTION:

### DO NOT APPLY USING ROLLERS

- **Mixing ratio of 2.5 Kg powder to 1 litre Liquid, do not add water, cement, admixtures, sand or any other compound.**

## CAUTION:

We do NOT recommend the use of Maxsealflex over ZINC or ZINC coated surfaces, treat these surfaces using Maxrest Passive as per TDS prior to coating.

## STORAGE

24 months in its unopened and undamaged original sealed packaging. Store in a cool, dry and covered place, protected from moisture, freezing and direct sunlight, with temperatures above 5°C.

## IMPORTANT INDICATIONS

**CONSUMPTION: For extreme situations Requiring full >4 bar positive and >1.5 bar Negative waterproofing** Apply two coats, using 1 – 1,5 kg/m<sup>2</sup> of **MAXSEAL FLEX EXPRESS** per coat and allow a minimum of **30-60 minutes** a maximum of 24 hrs. 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 20m<sup>2</sup> per Kit (35 Kg) is recommended**

In those areas such as fissures, concrete joints and active cracks should be sealed using **Maxjoint Elastic**, once repaired and sealed, **MAXSEAL FLEX EXPRESS** should be applied with a fibre glass mesh of 40-60 g/m<sup>2</sup>.

- Keep mixing ratio powder/ resin as supplied. Do not add more resin quantity. Do not add water or other compounds to the mix.
- Observe minimum and maximum consumption recommended.
- To keep workability of the fresh mix, remix again briefly the mixture but never add more water or resin.
- Do not apply on water-repellent substrates, bituminous materials, paints or resin coating.
- For additional information or other uses not specified on this Technical Bulletin, consult our Technical Department.

## SAFETY AND HEALTH

Safety Data Sheet of **MAXSEAL® FLEX EXPRESS** 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

<b>Product characteristics</b>	
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	Grey powder
Density for component A, (g/cm <sup>3</sup> )	1,05 ± 0,10
Density for component B, (g/cm <sup>3</sup> )	1,35 ± 0,10
Density for fresh mortar, (g/cm <sup>3</sup> )	1,50 ± 0,10
<b>Application and curing conditions</b>	
Minimum application temperature for substrate and ambient, (°C)	> 5
Pot life at 20°C & 50 % R.H., (min)	30
Minimum waiting time between coats at 20°C & 50% R.H., (min)	30-60
Curing time at 20°C, (h)	
- Covering with ceramic tiles, mortar, soil, etc.	2
- Water immersion and flooding tests.	72
<b>Cured product characteristics</b>	
Positive /direct water pressure, EN 12390-8 (ATM)	>4
Negative/ indirect water pressure, EN 12390-8 (ATM)	>1,5
Permeability to water vapour, EN ISO 7783-1/-2. Classification V (g/m <sup>2</sup> ·day) / S <sub>D</sub> (m)	Class I: Permeable to water vapour 6,8 / 3,0
Permeability to water and capillary absorption, EN 1062-3. w (kg/m <sup>2</sup> ·h <sup>0,5</sup> )	0,01
Permeability to CO <sub>2</sub> , EN 1062-6. S <sub>D</sub> (m)	83
Tensile strength, UNE 53510 (MPa)	>1,0
Elongation at break, UNE 53510 (%)	>40
Adhesion on concrete at 28 days, ASTM D4541 (MPa)	1,5
<b>Consumption*</b>	
Consumption per coat/total application, (kg/m <sup>2</sup> )	1,0-1,5 / 2,0-3,0

\* This figure is for guidance only and may vary depending on porosity, texture and conditions for substrate, and application method. Perform a preliminary test on-site to ascertain the total consumption exactly under jobsite conditions.

## 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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