



# MAXKOLA<sup>®</sup> FLEX

## FLEXIBLE CEMENT-BASED ADHESIVE MORTAR FOR LOW ABSORPTION TILES ON TRADITIONAL OR NON-RIGID SUBSTRATES

### DESCRIPTION

**MAXKOLA<sup>®</sup> FLEX** is an improved cement adhesive mortar with reduced slip and extended open time (Type and class C2TE), composed of hydraulic and synthetic binders, that once mixed with water provides a high performance mortar with excellent adhesion and flexibility, suitable for tiling of low porosity tiles and on non-rigid substrates, in both indoor and outdoor surfaces.

### APPLICATION FIELDS

- Fixing of low porosity or non-porous tiles, vitrified tile, glass mosaics, porcelain, marble, natural stone, etc for indoor or outdoor use, on floors and walls.
- Tiling of ceramic tiles on substrates subject to movements such as facades, under floor heating systems, roofs, timber, plastic, etc.
- Tiling on substrates subject to water immersion such as swimming pools, fountains, water tanks, etc.

### ADVANTAGES

- Very high adhesion on non-porous substrates and with good mechanical performance.
- Good flexibility, absorbing movements from substrate due to shrinkage processes, thermal dilatations, etc.
- Easy to use. Long open time.
- Excellent water retention, avoids dampen the substrate or tiles.

### APPLICATION INSTRUCTIONS

#### Surface preparation

Surfaces must be structurally sound, clean and free from dust, grease, paints, efflorescence, oils, demoulding agents, gypsum, loose concrete or any other material that could affect the adhesion of the product.

Substrate must be as flat as possible, with no unevenness greater than 5 mm measured with a 2 meters long guide. Voids, non- active cracks and surface damages must be prepared by chipping or sandblasting up to 2 cm depth and repaired with a structural mortar such as **MAXREST<sup>®</sup>** or **MAXRITE<sup>®</sup> 700** (Technical Bulletins on website) Observe a minimum curing time 24 hours before applying **MAXKOLA<sup>®</sup> FLEX**. Do not apply **MAXKOLA<sup>®</sup> FLEX** over dead, thin or delayed setting gypsum plasters.

#### Mixing

A 25 kg bag of **MAXKOLA<sup>®</sup> FLEX** is mixed with from 6,5 to 7,5 litres of clean water (26 - 28%), according to ambient conditions and desired consistency. Add the necessary amount of water in a clean container and pour **MAXKOLA<sup>®</sup> FLEX** slowly. Mix mechanically using a low speed drills (400-600 rpm) until achieving a lump free and homogeneous paste. Small quantities of product can also be mixed by hand. Do not mix for prolonged period nor use high-speed mixer. Allow mortar to rest for at least 5 minutes and then, remix briefly again before applying.

Only mix quantities that can be placed in 30 minutes. After this period, setting process starts and mortar losses its workability. If it is required, remix again briefly to keep its workability, but do not add more water.

#### Application

Apply **MAXKOLA<sup>®</sup> FLEX** in a thin layer on areas not greater than 2 m<sup>2</sup> at a time with a 6x6 mm notched trowel in order to control the application thickness and avoid the slumping of the tiles placed on vertical surfaces. Do not apply in thickness greater than 6 mm. While mortar is still fresh, place the pieces and press them with slight twisting motion, until flattening the ridges and ensuring the tile back achieves full contact with the mortar. Check the adhesion by occasionally removing a set piece and inspecting mortar transfer onto back of tile.

The open time at 20 °C is 30 minutes and the rectification time is 5 minutes, increasing with lower temperatures and reducing with higher temperatures. Remove excess mortar from the joint before it sets. Joint grouting can be carried out after 24 hours using a suitable **MAXJOINT®** range product. Large format or nonabsorbent tiles will take longer time.

For large-format pieces, i.e. bigger than 35x35 cm, it is recommended to apply double spread (application the adhesive on both surfaces of the substrate and the tile).

### Application Conditions

Do not apply when if rain is expected within 24 hours after application.

Do not apply with ambient or substrate temperatures below 5° C or if lower temperatures are expected during the following 24 hours. Do not apply on frozen or frosted surfaces.

Protect the application from high temperatures (> 30 °C), moderate to high winds, low humidity conditions or direct sunlight exposure, i.e. in summer time. Damp the substrate with water.

### Curing

Allow a minimum curing time of 1, 2 and 7 days at 20° C and 50% R.H. before joint grouting, open to pedestrian traffic, and for permanent immersion, respectively.

Applications carried out at lower temperatures with high relative humidity or with poor ventilation will require longer curing times.

Protect the application during the first hours of curing from high temperatures, high winds, low humidity conditions or direct sunlight exposure.

### Cleaning

Before **MAXKOLA® FLEX** sets all tools and equipment should be cleaned immediately with water. Once it hardens, it can only be removed by mechanical means.

### CONSUMPTION

The estimated consumption for **MAXKOLA® FLEX** is 1.5 kg/m<sup>2</sup>·mm thickness.

The consumption may vary depending on the roughness, porosity and other conditions for both tile and surface. A preliminary test on-site will determine the coverage exactly.

### IMPORTANT INDICATIONS

- Allow 28 days minimum curing for new concrete and mortars.
- Do not add cements, admixtures or aggregates that may affect the mortar properties.
- Observe the recommended mixing water ratio.
- Remix briefly the mortar in order to keep its workability, but do not add more water.
- Do not exceed the maximum thickness recommended per layer of 6 mm.
- The ceramic tiles must be set within the open time of the mortar, before non-adhesive skin is formed on the surface of the mortar.
- Double spread application is required for 35 x 35 cm ceramic tiles or higher dimensions and in heavy pedestrian traffic and with pronounced relief.
- For further information and other uses not specified in this Technical Bulletin, consult our Technical Department.

### PACKAGING

**MAXKOLA® FLEX** is supplied in 25 kg bag and it is available in standard grey and white colours.

### STORAGE

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

### SAFETY AND HEALTH

**MAXKOLA® FLEX** is non-toxic but has abrasive compounds, so protective rubber gloves and safety goggles must be used to prepare and apply the mixture. 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.

For further information, Safety Data Sheet of **MAXKOLA® 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

<b>Characteristics of the product</b>	
<i>CE Marking, UNE-EN 12004</i>	
Description: Improved cement adhesive with reduced slip and extended open time. C2TE Uses: Indoor and outdoor tiling in floors and walls.	
Appearance and colour	White or grey powder
Maximum aggregate size (mm)	0.8
Apparent density in powder form (g/cm <sup>3</sup> )	1.15 ± 0.10
Mixing water (% , by weight)	27 ± 1
Apparent density of mortar (g/cm <sup>3</sup> )	1.62 ± 0.10
<b>Application and curing conditions</b>	
Ambient and substrate optimum temperature (°C)	5 - 35
Open time at 20 °C (minutes)	30
Rectification time at 20 °C (minutes)	5
Curing time at 20°C and 50% R.H. (d)	
- Tile wound grouting	1
- Pedestrian traffic	2
- Permanent immersion	7
Water retention (g)	2.9
<b>Characteristics of the cured product</b>	
Slip at 23 °C and 50% R.H., EN 1308 (mm)	0.2
Tensile strength, EN 1348 (Mpa)	
- Initial bonding	1.6
- Bonding after immersion in water	1.3
- Bonding after thermal ageing	1.4
- Bonding after freeze / thaw cycles	1.5
Transversal deformation, EN 12002 (mm)	2.4
<b>Consumption* / Thickness</b>	
Consumption (kg/m <sup>2</sup> -mm thickness)	1.5
Recommended minimum / maximum thickness per layer (mm)	1.5 - 6

\* Consumption may vary depending on the roughness, porosity and other conditions for both tile and surface. A preliminary test on-site will determine the approximate coverage.



## Other Drizoro Products available from Scientific Waterproofing Products.

**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.

**MAXSEAL FOUNDATION** is a cement based product which, with special additives and selected aggregates to provide total waterproofing protection to concrete, bricks and blocks due to its high resistance to aggressive waters

Will seal against positive and negative water pressure.

**MAXJOINT ELASTIC** is a two-component product Component A is a liquid based on special synthetic resins. Component B, supplied in powder form, as a mortar based mixture of cements, additives and special aggregates.

When both components are mixed, an elastomeric product with high bond strength is achieved, suitable for sealing joints and cracks in concrete, pre-cast elements, mortars, bricks or **other porous surfaces**. Seals Joints against positive and negative pressure.

**MAXREST** is a one-component structural repair mortar, made of special cements, additives and selected aggregates, which provides a thixotropic product with quick-setting time that does not shrink.

It firmly adheres to the surface which it is applied on, restores concrete to its original condition.

**MAXGRIP** is a mixture of cements and selected special additives and aggregates. A pourable, cement-base, non-shrinking, quick-setting hydraulic compound for: Setting anchor bolts, rail posts, signposts. Parking meters, reinforcing rods and fixtures. Heavy machinery anchoring, hooks, pulleys.

Park seats, bridge railings, partitions. Safety rails, hand rails, balustrades. Flag and light poles.

**MAXPLUG** is a quick-setting cement-based mortar that instantly stops running water from cracks, fissures, holes or other openings in concrete and masonry. It is non-shrink and sets within three to five minutes depending on the temperature. Once **MAXPLUG** sets, it adheres perfectly to the substrate. It only requires water for mixing.



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Unit 4 92 Bryant Street PADSTOW NSW 2211 PO BOX 694 PADSTOW NSW

2211 Phone: 02 9771 0011 <http://www.swppl.com.au/> e-mail:

[info@swppl.com.au](mailto:info@swppl.com.au)

For other Waterproofing Products Contact:

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