# Systems for waterproofing and laying ceramic tiles or mosaics in swimming pools



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Litokol puts all its experience at your disposal with customised tests and research for the most suitable solutions based on a variety of materials.

Špecialists worldwide choose Litokol to create swimming pools in mosaics and ceramics.



# System for waterproofing and laying ceramic tiles baics in swimming pools DOODS

with single-component waterproofing membranes

(8)

4

3

5

1

2

Product

**1** - REINFORCED CONCRETE STRUCTURE 2 - LITOPLAN SMART 3 - AQUAMASTER (first coat diluted with 10% water) 4 - AQUAMASTER (second coat) **5** - AQUAMASTER (third coat) 6 - LITOPLUS K100/LITOELASTIC EVO 7 - STARLIKE<sup>®</sup> EVO, EPOXYÉLITE EVO (grouting joints) 8 - OTTOPRIMER 1218 + OTTOSEAL S70











# **Litoplan Smart**

Cementitious thixotropic levelling layer featuring rapid hardening and drying for vertical and horizontal applications indoors and outdoors in a range of thicknesses from 1 to 25 mm. Product with ultra-low volatile organic compound (VOC) emissions.

#### **TECHNICAL FEATURES**

Colour: Grev Mixing ratios: Water = 4-4.8 litres of water per 20 kg bag. Mix curing time: 5 minutes Mix consistency: Thixotropic -Plastic Mixture life:

About 60 minutes at a temperature of +23°C Application temperatures allowed: From +5°C to +35°C Applicable thicknesses: From 1 to 25 mm per coat Consumption: 1.6 kg/m<sup>2</sup> per every mm of thickness



of +23°C Waiting time for bonding: Ceramic tiles and natural stone: 4-6 hours Parquet, textiles and resilient floor materials: 24 hours

Set to light foot traffic: About 3 hours at a temperature

Storage: 12 months in original packaging in a dry place. Packaging: 20 kg bags





# **Litoelastic EVO**

High-performance, white, two-component reactive adhesive for laying floors and walls indoors and outdoors of any type of ceramic tile, including reinforced thin slabs, mosaics, natural and reconstituted stone even on non-traditional substrates, such as wood, metal and fibreglass. Suitable for installations over existing tiles, on heated floors and in pools. Product with ultra-low volatile organic compound (VOC) emissions.

#### **TECHNICAL FEATURES**

Colour: Component A: white Component B: straw-coloured transparent Mix ratio: Part A 92.6 parts by weight Part B 7.4 parts by weight Mixture life: About 1 hour at T=+23°C Application temperatures allowed: From +10°C to +30°C Bonding time: Approx. 1 hour Cleaning of equipment and residues: With water and Scotch-Brite<sup>™</sup> pad on wet product. Once hardened, mechanical

cleaning only Consumption:

Mosaics and small formats:

2 mm trowel: 1.1 kg/m<sup>2</sup> - 3.5 mm trowel: 1.8 kg/m<sup>2</sup> Normal formats with sides  $\leq$  60 cm: 8 mm trowel: 3 kg/m<sup>2</sup> - 10 mm trowel: 3.5 kg/m<sup>2</sup> Large formats with sides > 60 cm: Back-buttering 5 kg/m<sup>2</sup> Set to light foot traffic: Approx. 24 hours at T=+23°C Ready for use: 7 days Waiting time for grouting: Approx. 24 hours Storage: 24 months in original packaging. Keep away from frost Packaging: 5-10 kg buckets.

R2T 1-1-FN 12004

#### Cementitious adhesives

# Hyperflex K100

High-performance, no vertical slip, highly deformable cementitious adhesive with Dust Reduction action and extended open time for laying ceramic tiles and large format, moisture-resistant natural stone, glass and ceramic mosaic tiles, on walls and floors, indoors and outdoors. Suitable for thin, fibre-reinforced slabs, installation over existing substrates and on heated floors. Product with ultra-low volatile organic compound (VOC) emissions.

#### **TECHNICAL FEATURES** Colour: White or Grey Mix ratio: Water = 6-6.4 litres of water per 20 kg bag Mix curing time: 5 minutes Mix consistency: Creamy thixotropic mortar Mixture life: Approx. 8 hours Application: Notched trowel Maximum application thickness: 5 mm **Application temperatures allowed:** From +5°C to +35°C **Open time (EN1346):** $\geq$ 0,5 N/mm<sup>2</sup> after 30 minutes Waiting time for grouting:

Walls: 6 - 8 hours - Floor: 24 hours

Set to light foot traffic: 24 hours Ready for use: 7 days Temperature of use: From -30°C to +80°C How to clean equipment: With water when product is fresh. Mechanically when product has hardened. Consumption: 3.5 mm trowel: 1.5 kg/m<sup>2</sup> 6 mm trowel: 2.1 kg/m<sup>2</sup> 8 mm trowel: 3 kg/m<sup>2</sup> 10 mm trowel: 3.5 kg/m<sup>2</sup> Back-buttering: 4.5 kg/m<sup>2</sup> Storage: 12 months in original packaging in a dry place. Packaging: 20 kg bags







# Litoelastic EVO FR

High-performance, two-component, flexible reactive adhesive for laying floors and walls indoors and outdoors of any type of ceramic tiles, including reinforced thin slabs, mosaics, natural and reconstituted stone even on non-traditional substrates such as wood, metal and fibreglass. Suitable for installations over existing tiles, on heated floors and in pools. Low flamespread product compliant with Directive 2014/90/EU (MED) pursuant to IMO 2010 FTP Code for use on ships. Product with ultra-low volatile organic compound (VOC) emissions.

#### **TECHNICAL FEATURES**

Colour: Component A: white Component B: straw-coloured transparent Mix ratio: Part A 92.6 parts by weight Part B 7.4 parts by weight Mixture life: About 1 hour at T=+23°C Application temperatures allowed: From +10°C to +30°C Bonding time: Approx. 1 hour Cleaning of equipment and residues: With water and Scotch-Brite™ pad on wet product. Once hardened, only mechanical cleaning.

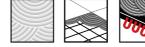
3.5 mm trowel: 1.8 kg/m<sup>2</sup> 8 mm trowel: 3 kg/m<sup>2</sup> 10 mm trowel: 3.5 kg/m<sup>2</sup> Set to light foot traffic: Approx. 24 hours at T=+23°C Ready for use: 7 days Waiting time for grouting: Approx. 24 hours Storage: 24 months in original packaging. Keep away from frost Packaging: 5 kg buckets.

Consumption: 2 mm trowel: 1.1 kg/m<sup>2</sup>











#### Reactive adhesives













# Starlike<sup>®</sup> EVO

Two-component acid-resistant epoxy grout for the laying and grouting of ceramic tiles and mosaic with joints between 1 and 15 mm width. Extremely easy to apply and clean. Suitable for direct contact with food substances. Product with ultra-low volatile organic compound (VOC) emissions. Patent Pending.

Application temperatures allowed: From +12°C to +30°C

24 months in original packaging, avoid freezing temperatures.

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ZHERORISK

**Recommended application temperature:** From +18°C to +23°C

Mix consistency: thixotropic creamy grout

Set to light foot traffic: 24 hours at  $T = +23^{\circ}C$ 

**Mixture life:** About 1 hour at  $T = +23^{\circ}C$ 

**Ready for use:** 5 days at  $T = +23^{\circ}C$ 

Joint width: From 1 to 15 mm

Packaging: 1-2.5-5 kg bucket

Storage:

Specific weight of mix: 1.55 kg/l

#### **TECHNICAL FEATURES**

Waiting time for grouting: Floor application: - with normal-setting adhesive: 24 hours - with fast-setting adhesive: 6 hours - with mortar: 7-10 days Wall application: - with normal-setting adhesive: 6-8 hours - with fast-setting adhesive: 6 hours - with mortar: 2-3 days Mixing ratios: Component A: 93.7 parts by weight Component B: 6.3 parts by weight

The two components are pre-measured in their respective packaging













100 Bianco Assoluto

102 Bianco Ghiaccio

105 Bianco Titanio

110 Grigio Perla

115 Grigio Seta

120 Grigio Piombo

125 Grigio Cemento

130 Grigio Ardesia

140 Nero Grafite

145 Nero Carbonio

235 Caffè





430 Verde Pino







Shining Gold

Copper



Bronze

Rusty



Two-component, translucent epoxy grout for grouting transparent glass or artistic mosaics with joints up to 3 mm. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: 700 Crystal
Mix ratio:
Component A: 93.7 parts by weight
Component B: 6.3 parts by weight
The two components are pre-measured in their respective packaging
Mix consistency: creamy grout
Specific weight of mix: 1.55 kg/l
Mixture life: About 1 hour at T=+23°C

emperatures for application: owed: from +12°C to +30°C - Recommended: from +18°C to +23°C t to light foot traffic: 24 hours at T=+23°C eady for use: 5 days at T=+23°C pint width: Up to 3 mm orage: months in original packaging, avoid freezing temperatures.

**RG** EN 13888

# Starlike<sup>®</sup> ColorCrystal EVO

Two-component, translucent, acid-resistant epoxy grout for grouting any type of glass mosaic with joints up to 3 mm width. Product with ultra-low volatile organic compound (VOC) emissions.

#### **TECHNICAL FEATURES**

Mix ratio: Component A: 93.7 parts by weight Component B: 6.3 parts by weight The two components are pre-measured in their respective packaging Mix consistency: creamy grout Specific weight of mix: 1.55 kg/l Mixture life: About 1 hour at T=+23°C Temperatures for application: Allowed: from +12°C to +30°C - Recommended: from +18°C to +23°C

Ready for use: 5 days at T=+23°C Joint width: Up to 3 mm Storage: Packaging: 2.5 kg buckets

Verde Capri

























ickaging: 1-2.5-5 kg buckets







Set to light foot traffic: 24 hours at T=+23°C

24 months in original packaging, avoid freezing temperatures.



820 Azzurro Taormina

825 Beiae Havana





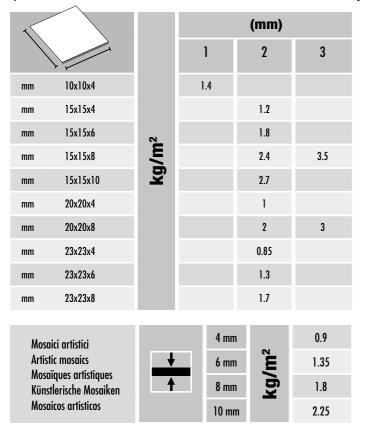




#### > STARLIKE<sup>®</sup> EVO - Consumption as grout

1			mm							
			1.5	2	3	4	5	7	10	
mm	10x10x4		1.40	1.86						
mm	10x10x10		4.65	6.20						
mm	15x15x4		0.8	1.7						
mm	15x15x10		2.1	4.1						
mm	15x30x8		1.2	2.5						
mm	20x20x3		0.70	0.93	1.40	1.86	2.33	3.26	4.65	
mm	23x23x8		1.1	2.2	3.2	4.3	5.4	7.5	10.8	
mm	25x25x10	2	1.2	2.5	3.7	5	6.2	8.7	12.4	
mm	50x50x4	Ξ	0.2	0.5	0.7	1	1.2	1.7	2.5	
mm	50x50x10	kg / m²	0.6	1.2	1.9	2.5	3.1	4.3	6.2	
mm	100x100x8	<b>X</b>	0.37	0.50	0.74	0.99	1.24	1.74	2.48	
mm	125x240x12		0.34	0.45	0.68	0.91	1.13	1.58	2.26	
mm	150x150x6		0.18	0.24	0.36	0.48	0.61	0.85	1.21	
mm	150x150x8		0.25	0.33	0.50	0.66	0.83	1.16	1.65	
mm	200x200x8		0.19	0.25	0.37	0.50	0.62	0.87	1.24	
mm	250x330x8		0.13	0.17	0.26	0.35	0.44	0.61	0.87	
mm	300x300x8		0.12	0.17	0.25	0.33	0.41	0.58	0.82	
mm	300x600x10		0.12	0.16	0.23	0.31	0.39	0.54	0.78	
mm	400x400x10		0.12	0.16	0.23	0.31	0.39	0.54	0.78	
mm	450x450x10		0.10	0.14	0.21	0.27	0.34	0.48	0.68	
mm	600x600x10		0.08	0.10	0.15	0.20	0.26	0.36	0.51	

#### > STARLIKE® CRYSTAL EVO / STARLIKE® COLORCRYSTAL EVO - Consumption as grout



# **EpoxyÉlite EVO**

Two-component acid-resistant epoxy grout for the laying and grouting of ceramic tiles and mosaics with 1- to 15-mm wide joints, on indoor and outdoor floors and walls. Product with ultra-low volatile organic compound (VOC) emissions





# **EpoxyÉlite EVO FR**

Two-component acid-resistant epoxy grout for the laying and grouting of ceramic tiles and mosaics with 1- to 15-mm wide joints, on indoor and outdoor floors and walls. Low flame-spread product compliant with Directive 2014/90/EU (MED) pursuant to IMO 2010 FTP Code for use on ships. Product with ultra-low volatile organic compound (VOC) emissions.

#### **TECHNICAL FEATURES** Waiting time for grouting:

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EN 12004

Floor installation with standard setting adhesive: 24 hours Floor installation with quick setting adhesive: 6 hours Cladding installation with standard setting adhesive: 6-8 hours

The two components are pre-measured in their respective packaging

Cladding installation with quick setting adhesive: 4 hours Mixing ratios:

Component A: 93.7 parts by weight Component B: 6.3 parts by weight

Mix consistency: thixotropic creamy grout

Specific weight of mix: 1.6 kg/l Mixture life: About 1 hour at T=+23°C Application temperatures allowed: From +10°C to +30°C Recommended application temperature: From +18°C to +23°C Set to light foot traffic: 24 hours at T=+23°C Ready for use: 5 days at T=+23°C Joint width: From 1 to 15 mm Storage:

24 months in original packaging. Keep away from frost. Packaging: 5 kg buckets (A + B)

210 Greige





- Recommended application temperature: From +18°C to +23°C Set to light foot traffic: 24 hours at T=+23°C
- 24 months in original packaging. Keep away from frost. Packaging: 5-10 kg buckets (A + B)

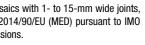






**EpoxyElite EVO FR** 













#### 100 Bianco Assoluto Grigio Perla

110



# Otto Primer 1218

Solvent-based, single-component synthetic resin solution based on the silicone-acrylic copolymer in solvents.

#### **TECHNICAL FEATURES**

Consumption: about 80-200 g/m<sup>2</sup> depending on absorption. Density at T=+23°C: about 0.95 g/cm<sup>3</sup>. Storage: 12 months in original packaging in a well-ventilated and dry environment. Packaging: bottle 100 ml





# **Litonet EVO**

Liquid detergents for the removal of epoxy grout stains and residue from all types of ceramic tiles, mosaics and natural stone

#### **TECHNICAL FEATURES**

Colour: Colourless Application temperatures allowed: From +5°C to +35°C Surface treatment time: Approx. 5 - 10 minutes Consumption: 10 - 15 m<sup>2</sup>/l Storage: 24 months in original packaging away from sources of heat and direct sunlight. Keep away from frost. Packaging: 1 litre bottles - 12 pc boxes and 5 litre canisters



# **Litonet Gel EVO**

Liquid detergents for the removal of epoxy grout stains and residue from all types of ceramic tiles, mosaics and natural stone. Specifically for wall applications.

#### **TECHNICAL FEATURES**

Colour: Colourless Application temperatures allowed: From +5°C to +35°C Surface treatment time: Approx. 5 - 10 minutes Consumption: 10 - 15 m<sup>2</sup>/l Storage: 24 months in original packaging away from sources of heat and direct sunlight. Keep away from frost. Packaging: 0.750 litre spray bottles in boxes of 12



# **Litogrip Floor**

#### Non-slip treatment for porcelain stoneware, granite, quartz and ceramic mosaic

- A water-based non-slip treatment for silica-based materials.
- It reacts with the surface, creating micro escape routes for the water. facilitating drainage and increasing surface friction.

#### **Fields of application**

Suitable for interior and exterior use on all silica-based materials such as stoneware, ceramics, granite, quartz, ceramic mosaics, etc.

- Surface treatment time: From 15 to about 60 minutes
- Consumption:15-20 m<sup>2</sup>/l

#### **TECHNICAL FEATURES**

Colour: Amber Application temperatures allowed: From +5°C to +35°C Surface treatment time: About 15 to 60 minutes Consumption: 15 -20 m<sup>2</sup>/l Storage: 24 months in original packaging in a well-ventilated and dry environment. Packaging: 1 litre plastic bottles



#### Detergents



#### Surface treatment





#### Classification of waterproofing products according to the EN 14891 standard

Classification of liquid-applied waterproofing products to use beneath ceramic tiling bonded with adhesives according to the Standard UNI EN 14891.

Liquid-applied waterproofing products are classified into three types: **CM** normal cementitious liquid-applied waterproofing products **DM** normal dispersion liquid-applied waterproofing products **RM** normal reactive liquid-applied waterproofing products

It is possible to have multiple classes for each type, related to the various optional features, such classes are designated by the following abbreviations:

**01** with improved crack-bridging ability at low temperatures (-5°C);

02 with improved crack-bridging ability at very low temperatures (-20°C);

P resistant to contact with chlorinated water (for example for use in swimming pools).

The product is designated with the symbol of the type (CM, DM or RM), followed by of the class or classes to which it belongs.



# Coverflex

Two-component cementitious mortar with the option for roller, brush or spatula application, elastic up to -20°C and chlorine resistant, for the under tile waterproofing of wet indoor and outdoor environments such as bathrooms, balconies, terraces and pools. Compliant with class CM02P pursuant to EN 14891.

#### **TECHNICAL FEATURES**

Colour of the mix: Light grey Mixing ratios: Component A (powder): 2 parts (1 x 20 kg bag) Component B (liquid): 1 part (1 x 10 kg canister) Mix curing time: 5 minutes Mix consistency: smooth fluid grout Mixture life: Approx. 1 hour Application temperatures allowed: From +5°C to +35°C Thickness: Not less than 2 mm in two subsequent coats Maximum application thickness: 2 mm per coat Application: Roller, brush or smooth steel trowel

#### Cleaning

The equipment and the surface of ceramic tiles must be cleaned from product residue with water before the product hardens. **Consumption:** 1.6 kg/m<sup>2</sup> per 1 mm of thickness Waiting time between 1st and 2nd layer: Approx. 3-4 hours at T=+23°C Waiting time for laying ceramic tiles: 5 days. 24 hours in good weather Storage: 12 months in original packaging in a dry place at temperatures not below +5°C. Component B (liquid) should be subjected to freezing temperatures. Packaging: 20 kg bag + 10 kg tank



## Osmogrout

Cementitious mortar with osmotic action for waterproofing, with direct or indirect load on walls and cement-based structures indoors and outdoors.

**TECHNICAL FEATURES** Colour: Grev Mixing ratios: Water = 26% (6.5 litres of water per 25 kg bag) Mix curing time: 5 minutes Mix consistency: Fluid grout for trowel/brush application Apparent volumetric mass of the wet grout: 1800 kg/m3 Mixture life: Approx. 1 hour Application temperatures allowed: From +5°C to +35°C Applicable thicknesses: Minimum = 1.5 mm - Maximum per coat = 2 mm

Maximum in two coats = 4 mm Application: Smooth steel trowel, brush. Waiting time for application of second coat: After 5-6 hours and not beyond 24 hours Ready for use: 7 days Temperature of use: From -30°C to +70°C How to clean equipment: With water when product is fresh. Mechanically when product has hardened. **Consumption:** 1.6 kg/m<sup>2</sup> per 1 mm of thickness Storage: 12 months in original packaging in a dry place. Packaging: 25 kg bag



#### Waterproofing products









# Aquamaster

Ready-to-use liquid membrane with the option for roller, brush or spatula application, elastic up to -5°C and chlorine resistant, for the under tile waterproofing of wet indoor and outdoor environments such as bathrooms, balconies, terraces and pools, compliant with standard ETAG 022 and class DM01P pursuant to EN 14891.

#### **TECHNICAL FEATURES**

Colour: Grev Application temperatures allowed: From +5°C to +35°C Total thickness to be applied in two/three successive coats: 0.8 - 1 mm Drying time at T=+23°C: 1st coat: (diluted 10% with water): 30 minutes

Successive coats: 4 hours between coats Application: Roller, brush or smooth steel trowel Cleaning:

The equipment must be cleaned from product residue



with water before the product hardens. Once dried, only mechanically. Waiting time for laying ceramic tiles: At least 24 hours from applying the final coat. Storage:

24 months in original packaging stored in a cool, dry place. Keep away from frost. Packaging: 10 kg buckets - Standard pallet 640 kg.

20 kg buckets - Standard pallet 600 kg.





\* ETAG 022

**A+** 

EC1

### **Litoband Sk Pipe Collar** Sk 8 - Pipe collar 120 x 120 mm - ø 8 mm. For pipes with ø 15-20 mm.

Sk 35 - Pipe collar 250 x 250 mm - ø 35 mm. For pipes with ø 45-60 mm. Sk 65 - Pipe collar 250 x 250 mm - ø 65 mm. For pipes with ø 75-125 mm

#### **TECHNICAL FEATURES**

Colour: White Total dimensions: Sk 8 - 120x120 mm. Sk 35/Sk 65 - 250x250 mm. Diameter flexible area: Sk 8 - 25 mm. Sk 35 - 65 mm. Sk 65 - 130 mm. Hole diameter: Sk 8 - 8 mm. Sk 35 - 35 mm. Sk 65 - 65 mm. For pipes with diameter: Sk 8 - 15-20 mm. Sk 35 - 45-60 mm. Sk 65 - 75-125 mm. Total thickness: 0.60 mm.

Water pressure resistance: >1.5 bar (DIN EN 1928-version B) Elongation at break (fabric): 100% (DIN 527-3) Elongation at break (flexible area): 600% (DIN 527-3) Packaging: 25 pieces per box

# Litoband Sk Tape

Polypropylene fabric sealing with thermoplastic elastomer waterproof lining.

**TECHNICAL FEATURES** Colour: Grev Height: 120 mm. Total thickness: 0.7 mm Weight: 43 g/m Roll length: 10 - 50 m. Resistance to water pressure: >1.5 bar (DIN EN 1928-version B) Longitudinal elongation at break: 70% (DIN 527-3) Lateral elongation at break: 335% (DIN 527-3) Packaging: 1 roll per box



# Litoband Sk Self-Adhesive Drain Collar

Self-adhesive gasket in butyl rubber for drains (370 x 370 mm)

#### TECHNICAL FEATURES

Colour: Grey Sizes: 370x370 mm Total thickness: 1.3 mm (without adhesive film protection) Weight: 217 g

Roll length: 10 - 50 m. Packaging: 10 pieces per box

# Litoband Sk Corners IC - Corners EC

Inner corner - external corner

#### **TECHNICAL FEATURES**

Colour: Grey Height: 120 mm. Butyl height: 70 mm. Total thickness: 0.7 mm. Resistance to water pressure: >1.5 bar (DIN EN 1928-version B) Longitudinal elongation at break: 73% (DIN 527-3) Lateral elongation at break: 242% (DIN 527-3) Packaging: 25 pieces per box



# **Fibreglass mesh**

Anti-alkaline fibreglass mesh for reinforcement

**TECHNICAL FEATURES** Colour: White Mesh dimensions: 4x5 mm. **Roll dimensions:** Length = 50 m - Height = 1 m Alkaline resistance: excellent Storage: Unlimited Packaging: Rolls of 50 m<sup>2</sup> Standard pallet 3000 m<sup>2</sup>









Lafodia Sea Resort - Croatia





#### Resort Fushifaru Maldives - Maldives

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