STARLIKE® CRYSTAL

TRANSLUCENT EPOXY MORTAR WITH TWO ANTACID COMPONENTS FOR GROUTING TRANSPARENT AND ARTISTIC GLASS MOSAICS WITH JOINTS UP TO 3.175 mm / 1/8". WIDE

New patented formulation resistant to UV and the weather-climate; developed in collaboration with the University of Modena and Reggio Emilia

DESCRIPTION

Part A consists of a mixture of epoxy resin, inert substances based on glass beads with a fine particle size and rheological components of organic origin. Part B consists of a mixture of amine-based hardeners. The main features of the product are:

- Translucent colour that allows light filtration.
- Smooth finish thanks to the fine particle size of the inert substances.
- Extremely easy application and cleaning.
- High mechanical strength.
- Water proof.
- Total absence of cracks or crazing after hardening.
- Excellent chemical resistance.
- Product suitable for direct contact with food under Italian Ministerial Decree of 21/03/1973 (a copy of the certificate can be requested from the Litokol Technical Office)

EN 13888 CLASSIFICATION: Class RG – Reactive sealant for joints

Packs

1 kg plastic bucket	- 200 kg EUR Pallet
2.5 kg plastic bucket	- 437.5 EUR Pallet
5 kg plastic bucket	- 500 kg EUR Pallet

FIELDS OF APPLICATION

Starlike® Crystal's special translucent colouring allows the product applied in the joints to "absorb" the colour of the transparent glass tiles and then adapt according to the colour. The best results are obtained if the mosaic is applied to transparent supports such as glass and Plexiglas, possibly backlit by a light source.
In this case, the mosaics must be glued using a suitable transparent adhesive in cartridge form. In the case of traditional supports such as cement plasters or plaster of Paris, panelling etc. the mosaics must be bonded with Litoplus K55 white adhesive (class C2TE cement adhesive) or Litoelastic (two-component reactive adhesive class R2T) depending on the type of support. Thanks to this feature, with Starlike® Crystal it is possible to achieve glass mosaic surfaces with effects of considerable value and visual impact such as:

- Creating backlit interior walls.
- Backlit coatings of bars or public places.
- Floors and walls in bathrooms, kitchens, showers etc.
- Creating furnishing surfaces such as columns, tables etc.

Another possibility is using Starlike® Crystal for grouting artistic, i.e. compositions made up of mosaic tiles which, when suitably shaped and mixed, reproduce exclusive images rich in nuances and shadows. If the grouting of these images is done with traditional coloured sealants, the appearance of the figure represented is compromised, because the coloured grout creates a discontinuity between the mosaic tiles.
Conversely, using Starlike® Crystal, thanks to its semi-transparency, retains the original nuances of the composition, creating "neutral", colourless grouting that does not interfere with the image.

PRELIMINARY CHECKS AND PREPARATION OF JOINTS

Make sure that the adhesive used for bonding the mosaic is completely dry and hardened. The joints must be completely dry, clean, free of dust and empty for the entire thickness of the mosaic in order to ensure the translucent effect of the product. For bonding, it is advisable to use a spatula with small 2 mm triangular teeth (art. 112/D-V2).

MIXING RATIO

Component A: 100 parts in weight
Component B: 8.3 parts in weight
The two components are pre-dosed in their respective packs.

PREPARING THE MIXTURE

Cut one corner of the sachet containing the catalyst (component B) located inside the bucket and pour it onto component A (paste). It is advisable to pour out the entire contents of the catalyst, rolling and squeezing the sachet progressively from the sealed side towards the cut side.
Mix with the electric drill fitted with a paddle, from the bottom upwards at a low number of revs until an even lump-free mixture is obtained.
Scrape the sides and bottom of the bucket with a spatula or trowel to ensure no non-catalysed product remains. It is not advisable to do the mixing by hand.
The packs of the components are pre-dosed, and therefore make any error in mixing impossible. The resulting mixture remains workable for about 1 hour at a temperature of about +23°C.

GROUTING THE MOSAIC SURFACE

Apply the mixture obtained into the joints, using the special green spatula (art. 946/GR). In the case of wall application, it is recommended that the sealant is applied in complete vertical strips before cleaning.
Remove any excess product using the same rubber spatula. The material must be introduced in the joints before cleaning with water so as to prevent the formation of white crystals on the surface.
The workability and hardening time of the product is greatly influenced by the environmental temperature.
The optimum temperature for application is between +18 and +23°C.

Under these conditions, the product appears like a soft, easily workable mortar, with a workability time of approximately 1 hour. It will be possible to walk on it after 24 hours.
At a temperature of +15°C, it will take three days before it can be walked on. At temperatures of between +8 and +12°C, the product proves to be more consistent and harder to apply.
The hardening time is also greatly lengthened. It is advisable not to add water or solvents to improve the workability. At high temperatures, it is advisable to distribute the product as quickly as possible onto the surface, so as not to further shorten the workability time following the reaction heat present in the pack.

CLEANING AND FINISHING

Cleaning and finishing the grouting should be done while the product is still fresh, and in all cases as quickly as possible, taking care not to empty the joints and without leaving product marks on the surface of the mosaics.
Carry out initial cleaning using a spatula with damp white felt (art. 109/G), using a lesser amount of water and making circular movements both clockwise and anti-clockwise, in order to seal the sides of the mosaic tiles perfects and to remove any excess sealant from the surface. During this phase it is important to avoid water stagnation by promptly intervening with a tightly squeezed rigid sweepex sponge (art. 128/G). This second cleaning is indispensible in order to obtain a smooth, closed surface, completely removing the product from surface of the mosaic, without emptying the joints and drying any excess water.
During this phase, prevent the water from entering the joints that are still empty, interrupting the cleaning process a few centimetres before the empty joints.
If holes or imperfections are noted, it is recommended to promptly restore these when the surface has dried and the product has hardened.
When the felt and sponge are impregnated with resin and can no longer be cleaned, they must be replaced.
Stains or residues of transparent product can be removed after 24 hours or at any rate after grout hardening (the time of hardening depends greatly on the environmental temperature), using the specific cleaners LITONET (for floors) and LITONET GEL (for walls).
Read the relative technical data sheet for correct use.

USING LITONET AND LITONET GEL TO REMOVE MARKS

Spread LITONET or LITONET GEL onto the surface to be cleaned with the help of the white felt (art. 109/G). Leave on for 15-30 minutes.
Then intervene with the white felt, rubbing the surface.
Rinse with clean water and dry immediately with a clean, dry cloth.
Do not wait for the rinse water to evaporate as marks would form again on the mosaic surface.

WARNINGS

• The product can only be applied for grouting transparent or artistic glass mosaics with joints not exceeding 3.175 mm / 1/8”.
• Apply the product at temperatures between +12 °C and +30 °C. Do not apply if there are low temperatures or high humidity so as to prevent the formation of surface carbonation which could affect the uniformity of the colour.
• Prevent the water from entering the joints that are still empty while cleaning, interrupting the cleaning process a few centimeters before the empty joints.
• The material must be introduced in the joints before cleaning with water. If holes or imperfections are noted, these should be promptly restored once the surface has dried and the product has hardened.
• Avoid rising adhesive in the thickness of the joint as this interferes with the end colour. Even discontinuity in the application of the adhesive can be noted when the grouting is completed.
• Make sure that the equipment used and the mosaic that is to be sealed are cleaned. Any colour interference is noted since it is a translucent product.
• Remove any excess product promptly from the surface of the mosaics as, once hardening has taken place, the product can no longer be removed unless mechanically, with serious risks for the final result of the work.
• Mix the two components (A+B) correctly.
• Change the water frequently.
• Change the felt and sponge when saturated with product.
• Do not wait more than 72 hours for the final cleaning with Litonet or Litonet gel.
• Do not walk on the newly grouted surface, in order to avoid damaging the flooring with resin residues.
• Do not cover the newly grouted surface with cloths or other material so as to prevent the formation of condensation that would lead to surface carbonation on the product, altering the uniformity of the colour. Wait at least 24-48 hours depending on the temperature before protecting the surface.
• The product cannot be used for grouting tanks containing aggressive substances permitted for intermittent contact only (see chemical resistance chart shown in the technical data sheet).
• Do not mix the product with water or solvents.

IDENTIFICATION DATA

Appearance	**Component A**: translucent paste **Component B**: thick liquid
Colour	Crystal C.350
Customs classification	35069190
Storage time	24 months in the original packs in a dry place

APPLICATION DATA

Recommended adhesives for laying mosaics	**Cement foundations, plaster of Paris base, old tiles**: Litoplus K55 **Wood, metal, fibreglass-reinforced plastic panelling**: Litoelastic **Plexiglass:** Primer 1217 + OTTOCOL M501 transparent **Glass:** OTTOCOL M501 transparent
Recommended spatula	Spatula with small 2 mm triangular teeth (art. 112/D – V2)
Waiting time for grouting	24 hours
Mixing ratio	**Component A**: 100 parts in weight **Component B**: 8.3 parts in weight The two components are pre-dosed in their respective packs
Consistency of the mixture	Doughy
Specific weight of the mixture	1.55 kg/l
Useable time of the mixture	About 1 hour at T=+23°C
Application temperatures	**Admissible**: from +12°C to +30°C - **Recommended**: from +18 to +23°C
Can be walked on	24 hours at T=+23°C
Working time	5 days at T=+23°C
Width of the joints	Up to 3.175 mm / 1/8”

PERFORMANCE

Abrasion resistance (EN 12808-2)	≤ 250 mm^3
Mechanical resistance to bending after 28 days in standard condition (EN 12808-3)	≥ 30 N/mm^2
Mechanical resistance to compression after 28 days in standard conditions (EN 12808-3)	≥ 45 N/mm^2
Shrinkage (EN 12808-4)	≤ 1,5 mm/m
Water absorption after 4 hour (EN 12808-5)	≤ 0,1 g
Operating temperatures	From – 20°C to +100°C

CONSUMPTION

1.5 kg/m² for mosaics 20x20 mm thickness 3 mm (joint = 3.175 mm)
3.0 kg/m² for mosaics 10x10 mm thickness 3 mm (joint = 3.175 mm)

SAFETY INFORMATION

Consult the Material Safety Data Sheet, available on request.

PRODUCT FOR PROFESSIONAL USE.

SPECIFICATIONS

The decorative grouting of the joints between glass mosaics, generally applied to the floor or wall indoors or outdoors must be applied with translucent two-component acid resistant epoxy mortar such as Starlike® Crystal of Litokol Spa. The grouting will be smooth and compact, with no cracks, non-absorbent, uniform in colour, UV resistant and weatherproof.

CHEMICAL RESISTANCE TABLE

(the table is a summary of the chemical resistance proof made according to regulation UNI EN 12808)
CHEMICAL RESISTANCE OF CLADDINGS GROUTED WITH STARLIKE® CRYSTAL

Group	Name	Conc. %	CONTINUOUS USE				INTERMITTENT USE
			24 hours	7 days	14 days	28 days	
Acids	Acetic Acid	2,5	🟢	🟢	🟢	🟢	🟢
		5	🟢	🟢	🟢	🟡	🟢
	Hydrochloric Acid	37	🟢	🟢	🟢	🟡	🟢
	Citric Acid	10	🟢	🟢	🟢	🟢	🟢
	Acido lattico	2,5	🟢	🟢	🟢	🟢	🟢
		5	🟢	🟢	🟢	🟢	🟢
		10	🟢	🟢	🟢	🟢	🟢
	Nitric Acid	25	🟢	🟢	🟢	🟢	🟢
		50	🟢	🔴	🔴	🔴	🟢
	Oleic Acid	-	🟢	🔴	🔴	🔴	🟢
	Vitriol	1,5	🟢	🟢	🟢	🟢	🟢
		50	🟢	🟢	🟢	🟢	🟢
		96	🔴	🔴	🔴	🔴	🔴
	Tannic Acid	10	🟢	🟢	🟢	🟢	🟢
	Tartaric Acid	10	🟢	🟢	🟢	🟢	🟢
	Oxalic Acid	10	🟢	🟢	🟢	🟢	🟢
Alkalis	Ammonia in solution	25	🟢	🟢	🟢	🟢	🟢
	Caustic Soda	50	🟢	🟢	🟢	🟢	🟢
	Sodium Hypochlorite Conc. Cl active	>10	🟢	🟢	🟢	🟡	🟢
	Caustic Potash	50	🟢	🟢	🟢	🟢	🟢
	Sodium Bisulphite	10	🟢	🟢	🟢	🟢	🟢
Concentrated solutions 20°C	Iposulphite Sodium		🟢	🟢	🟢	🟢	🟢
	Calcium Chloride		🟢	🟢	🟢	🟢	🟢
	Sodium Chloride		🟢	🟢	🟢	🟢	🟢
	Ferric Chloride		🟢	🟢	🟢	🟢	🟢
	Sugar		🟢	🟢	🟢	🟢	🟢
Oils and fuels	Petrol, Fuels		🟢	🟢	🟢	🟡	🟢
	Turpentine		🟢	🟢	🟢	🟢	🟢
	Gas Oil		🟢	🟢	🟢	🟢	🟢
	Olive Oil		🟢	🟢	🟢	🟢	🟢
	Lube Oil		🟢	🟢	🟢	🟢	🟢
Solvents	Acetone		🟢	🔴	🔴	🔴	🟢
	Ethylene Glycol		🟢	🟢	🟢	🟢	🟢
	Glycerine		🟢	🟢	🟢	🟢	🟢
	Ethyl Alcohol		🟢	🟢	🟡	🔴	🟢
	Solvent Petrol		🟢	🟢	🟢	🟢	🟢
	Peroxide Water	10	🟢	🟢	🟢	🟢	🟢
		25	🟢	🟢	🟢	🟢	🟢

KEY

🟢 EXCELLENT RESISTANCE
🟡 GOOD RESISTANCE
🔴 POOR RESISTANCE

Although the information in this technical chart is from our best experience, it is merely indicative. Each specific case must be subjected to practical preliminary tests by the user who undertakes the responsibility for the final work result.

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