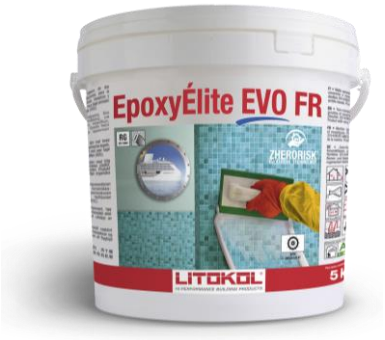
EPOXYÉLITE EVO FR

**ACID-RESISTANT TWO-PART EPOXY MORTAR
TO GROUT CERAMIC TILES
AND MOSAICS WITH 1 to 15 mm JOINTS
FOR THE INDOOR AND OUTDOOR INSTALLATION OF FLOORING AND WALLS.
LOW FLAME-PROPAGATION PRODUCT
COMPLIES WITH DIRECTIVE 2014/90/ EU (MED) PURSUANT TO IMO 2010 FTP Code FOR THE USE IN THE MARINE INDUSTRY
PRODUCT WITH ULTRA-LOW EMISSION OF VOLATILE ORGANIC COMPOUNDS (VOC)**



RG Conforme alla norma EN 13888 — CE EN 12004

GEV-EMICODE EC1 PLUS very low emission

ÉMISSIONS DANS L'AIR INTÉRIEUR A+ (A+ A B C)

ZHERORISK® EVOLUTION TECHNOLOGY

DESCRIPTION

Two-part anti-acid epoxy mortar. Part A consists of a mixture of epoxy resin, selected fine-grain inert aggregates, pigments and specific organic additives. Part B consists of an innovative organic catalyst. Once mixed together, the two parts form a creamy mixture with excellent smoothness, which is also suitable for vertical no-slip application. Once hardened, the product is high-performing in term of mechanical and chemical resistance. The product has been expressly formulated to meet the requirements of Part 5 of the IMO FTP Code 2010 as "finishing material for bulkheads and ceilings" for the naval sector.

ADVANTAGES

• Reactive grout formulated with specific raw materials with limited flame-propagation properties, which gives the product exceptional ease of application.
• Depending on the grain texture of the aggregates, it is possible to obtain a particularly smooth and compact grout with a high aesthetic impact and minimum staining.
• Suitable for indoor and outdoor floor and wall applications, even in harsh operating conditions.
• Product with high resistance to mechanical stress and chemical substances and no water absorption.
• Product with ultra-low emission of volatile organic compounds. Compliant with EC1PLUS classes according to the EMICODE protocol and Class A +, pursuant to French Regulations.
• Product not subject to restrictions for road, sea, air and rail transport.

EN 13888 CLASSIFICATION

EpoxyÉlite EVO FR: Class RG Reactive grout.

CERTIFICATION ACCORDING TO IMO Res. MSC.307(88)-(2010 FTP Code)

Certificate no. MED311618CS/001 issued by *RINA Services S.p.A.*

PACKAGING

5 kg (A+B) Plastic bucket - 500 kg Pallet

FIELDS OF APPLICATION

Suitable for the acid-resistant grouting of floors and walls, for application on ceramic tiles and mosaics with 1 to 15 mm wide joints, in the naval sector, in combination with the reactive adhesive Litoelastic EVO FR. Suitable for applications where the surfaces are exposed to aggressive chemical substances (see Chemical Resistance Table) such as dairies, slaughterhouses, breweries, and food factories in general. Suitable for applications subject to heavy-duty operating conditions, such as swimming pools, hammams, whirlpools, heavy-traffic floors, and tiles exposed to extreme temperature fluctuations. Typical applications include:
• Grouting of ceramic tiles and mosaics on wooden kitchen tops;
• Grouting of ceramic tiles and mosaics in swimming pools, including surfaces waterproofed with Elastocem, Coverflex or Aquamaster;
• Grouting of ceramic tiles, mosaics and natural stones installed on metal surfaces for the construction of prefabricated bathrooms;
• Grouting of ceramic tiles, thin reinforced slabs, mosaics, natural stones or resin agglomerates installed on heated floors;
• Grouting of glass or ceramic mosaic joints installed on structures and templates of extruded polystyrene panels used in Turkish baths, hammams and wellness centres;
• Also recommended for grouting swimming pools or pools containing spring water.

PRELIMINARY CHECKS AND JOINT PREPARATION

Make sure that the ceramic tiles can be cleaned easily and their surface is not absorbent. In fact, some types of tiles (e.g., polished porcelain tiles) or natural stones feature micro-porosities and surface roughness that can stain their surface and make cleaning very difficult. In these cases, it is advisable to perform a spot test and, in any case, avoid using grouts with contrasting or very dark colours.
Check that the adhesive or mortar used for bonding the tiles is completely hardened and dry. The joints must be clean, free from dust and any debris. Any traces of adhesive or mortar flowing between the joints and the plastic spacers must be removed.

MIX RATIO

Part A: 93.7 parts by weight
Part B: 6.3 parts by weight
The two parts are pre-batched in their respective packaging.

MIX PREPARATION

Pour part B (catalyst) onto part A (paste). We recommend pouring all the catalyst contained in the bag. Mix preferably with the help of a drill mixer to obtain a smooth, lump-free mixture. Hand mixing is

not recommended. The two parts are pre-batched in their packaging, thus avoiding the risk of mixing errors.

TILED SURFACE GROUTING

Apply the paste in the joints using a green rubber trowel (item 946GR), removing any excess product. The product's working life and hardening time is strongly dependent on the ambient temperature. The optimum application temperature is between +18°C and +23°C. Under these conditions, the product is soft, easily workable and with a working time of approximately 1 hour. It is ready for foot traffic after 24 hours. The surface can be commissioned after 7 days at a temperature of +23°C. At temperatures between +8°C and +12°C, the product is very thick and difficult to apply. The hardening time is also lengthened considerably. Do not add water or solvents to improve workability. In the presence of high temperatures, we recommend applying the product as quickly as possible on the floor, in order not to shorten the workability time further due to the reaction heat present in the package.

CLEANING AND FINISHING

The grout work must be cleaned and finished while the product is still wet and in any case in the shortest possible time.Take care not to remove product from the joints or leave stains on the tile surface.
First sprinkle clean water over the grouted surface. Perform an initial cleaning with a trowel equipped with a damp white felt (item 109 GBNC) to remove excess product, making circular movements clockwise and counter-clockwise, in order to perfectly seal the sides of the tiles and to remove excess grout from the tile surface. Complete a second cleaning cycle with a sweepex sponge (item 128G0001) for smooth and gap-free grout, completely removing the product from the tiles, making sure that you do not remove any grout from the joints, and drying any excess water. To facilitate the cleaning operation, we recommend using two bucketfuls of water, one for rinsing felt and sponge and to collect any dirty water, and the other with clean water for the final surface cleaning. Replace felt and sponge when they become soaked with resin and can no longer be cleaned.

Any product residue left behind on the surface of ceramics can be removed using Litonet and Litonet Gel cleaners after about 24 hours and, in any case, once the grout has hardened.

WARNINGS

• If possible, apply the product at temperatures between +18°C and +23°C.
• Do not apply the product under high humidity conditions, in order to avoid superficial carbonatation phenomena.
• Avoid contact of dust or polluting materials from concomitant processes with grout that has not yet hardened.
• Promptly remove any excess product from the tile surface given that, once hardened, the product can only be removed mechanically, with serious risks of compromising the final outcome.
• The product cannot be used for grouting Tuscan terracotta.
• Some types of tiles (e.g., polished porcelain tiles) or natural stones feature micro-porosities and surface roughness that can stain their surface and make cleaning very difficult. In these cases, it is advisable to perform a spot test and, in any case, avoid using grouts with contrasting or very dark colours.
• The product cannot be used for grouting tanks containing aggressive substances, which are allowed only for intermittent contact (see Chemical Resistance Table).
• Do not mix the product with water or solvents.
• Do not use the product for applications not stated in this technical sheet

SAFETY INFORMATION

Consult the product safety data sheets, available on request.
PRODUCT FOR PROFESSIONAL USE

ITEM SPECIFICATION

In the naval sector, the grouting of any type of ceramic tiles, natural stones, glass or ceramic mosaics, resin agglomerates, thin slabs with and without reinforcement, must be performed with a reactive two-part RG-class grout with limited flame-propagation properties, pursuant to EN 13888, such as EpoxyÉlite EVO FR, produced by Litokol S.p.A.

IDENTIFICATION DATA	
Appearance	Part A: thick paste Part B: liquid
Colours	100 Bianco Assoluto
	110 Grigio Perla
Classification as per EN 13888	RG- reactive grout
IMO Classification - Res. MSC.307(88)-(2010 FTP Code)	Certificate no. MED311618CS/001 issued by *RINA Services S.p.A.*
Customs code	35069190
Shelf life	24 month in original packaging Keep away from frost

APPLICATION DATA	
Ready for grouting	Floor installation with standard setting adhesive: 24 hours Floor installation with quick setting adhesive: 4 hours Cladding installation with standard setting adhesive: 6-8 hours Cladding installation with quick setting adhesive: 4 hours
Mixing ratios	Part A: 93.7 parts by weight Part B: 6.3 parts by weight The two parts are pre-batched in their respective packaging.
Mix consistency	Thixotropic paste

Specific gravity of mix	1.6 kg/L
Pot 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
Walk on time	24 hours at T=+23°C
Ready for use	7 days at T=+23°C
Joint width	From 1 to 15 mm

Consumption

	Format (cm)	Joint width (mm)	Consumption (kg/m²)
Mosaics	1.0X1.0X0.4 1.5X1.5X0.4 1.5X1.5X0.6 1.5X1.5X0.8 1.5X1.5X1.0 2.3X2.3X0.4 2.3X2.3X0.6 2.3X2.3X0.8	2	1.4 1.2 1.8 2.4 2.7 0.85 1.3 1.7
Clinker	12x24x1.2 25x25x1.2	5-8-10	1.16-1.86-2.33 0.74-1.19-1.49
	10 x 10 x 0.6 15 x 15 x 0.6	3-4-6	0.56-0.74-1.12 0.37-0.50-0.74
	15 x 20 x 0.6 25 x 25 x 1.2	3-4-6-8	0.33-0.43-0.65-0.87 0.45-0.60-0.89-1.19
	25 x 33 x 0.8 33 x 33 x 1	4-8-10	0.35-0.70-0.87 0.38-0.75-0.94
	30 x 45 x 1 45 x 45 x 1.2	4-10	0.34-0.86 0.33-0.83
	50 x 50 x 1.2 60 x 60 x 1.2	6-10	0.45-0.74 0.37-0.62

PERFORMANCE		
Abrasion resistance	≤ 250 mm^3	**EN 12808-2**
Flexural strength after 28 days at standard conditions	≥ 30 N/mm^2	**EN 12808-3**
Compression strength after 28 days at standard conditions	≥ 45 N/mm^2	**EN 12808-3**
Shrinkage	≤ 1.5 mm	**EN 12808-4**
Water absorption after 4 hours	≤ 0.1 g	**EN 12808-5**
Temperature of use	From - 20°C to +100°C	
Chemical resistance	See Table	

CHEMICAL RESISTANCE TABLE

(the table is a summary of the chemical resistance proof made according to regulation UNI EN 12808-1)
CHEMICAL RESISTANCE OF CERAMIC SURFACE GROUTED WITH EPOXYÉLITE EVO - DESTINATION ENVIRONMENT: INDUSTRIAL FLOORING

Group	Name	Conc. %	CONTINUOUS USE				INTERMITTENTUSE
			24 hours	7 days	14 days	28 days	
Acids	Acetic Acid	2.5	●	●	●	●	●
		5	●	●	●	●	●
	Hydrochloric Acid	37	●*	●	●	●	*
	Citric Acid	10	●	●	●	●	●
	Lactic Acid	2.5	●	●	●	●	●
		5	●	●	●	●	●
		10	●	●	●	●	●
	Nitric Acid	25	●	●	●	●*	●
		50	●	●	●	●	●
	Pure Oleic Acid	-	●	●	●	●	●
	Sulphuric Acid	1.5	●	●	●	●	●
		50	●	●	●	●	●
		96	●	●	●	●	●
	Tartaric Acid	10	●	●	●	●	●
Alkalis	Ammonia in solution	25	●	●	●	●	●
	Caustic Soda	50	●	●	●	●	●
	Sodium Hypochlorite in solution Conc. Active Cl	10	●	●	●	●	●
	Potassium hydroxide	50	●	●	●	●	●
Saturated solutions at 20°C	Calcium Chloride		●	●	●	●	●
	Sodium Chloride		●	●	●	●	●
	Sugar		●	●	●	●	●
Oils and fuels	Lead-free gasoline		●	●	●	●	●
	Diesel		●	●	●	●*	●
	Extra Virgin Olive Oil		●	●	●	●	●
	Lube Oil		●	●	●	●	●
Enzymatic cleaners	Cleaner 1 at 4%		●	●	●	●*	●
	Cleaner 2 at 5%		●	●	●	●	●
Solvents	Acetone		●	●	●	●	●
	Ethylene Glycol		●	●	●	●	●
	Ethyl alcohol		●*	●*	●*	●*	*
	Hydrogen Water	10 vol.	●	●	●	●	●
		25 vol.	●	●	●	●	●

KEY ● RESISTANT ●* RESISTANT WITH POSSIBLE COLOUR VARIATION ● NOT RESISTANT

Although the information provided in this technical data sheet is accurate to the best of our knowledge and experience, it is intended purely as a guideline. The user must carry out preliminary practical tests before each use and is solely responsible for the final result.

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Litokol S.p.A.
Via G. Falcone 13/1 - 42048 Rubiera (RE) Italy
Tel: +39 0522 622811 - Fax: +39 0522 620150
info@litokol.it www.litokol.it