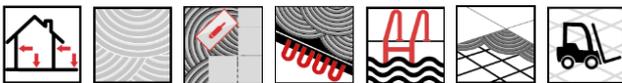
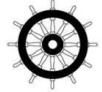


LITOELASTIC EVO FR

WHITE TWO-PART FLEXIBLE REACTIVE HIGH-PERFORMANCE NO VERTICAL SLIP ADHESIVE, FOR THE INDOOR AND OUTDOOR INSTALLATION OF ANY TYPE OF CERAMIC TILES, MOSAICS, NATURAL AND COMPOSITE STONES ON FLOORS AND WALLS. LOW FLAME-PROPAGATION PRODUCT COMPLIANT WITH DIRECTIVE 2014/90/EU (MED), PURSUANT TO REGULATION IMO 2010 FTP CODE FOR USE IN THE NAVAL SECTOR. PRODUCT WITH ULTRA-LOW EMISSION OF VOLATILE ORGANIC COMPOUNDS (VOC).



DESCRIPTION

White two-part flexible reactive water- and solvent-free adhesive, with high water repellency. Part A consists of synthetic resins, fine-grain inert aggregates and specific organic additives. Part B consists of an innovative organic catalyst. Once mixed together, the two parts form an easily workable, thixotropic and particularly smooth paste that facilitates the work of installers. 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 adhesive formulated with specific raw materials with limited ability to propagate flames, which give the product exceptional ease of application, unique in its kind.
- Suitable for indoor and outdoor floor and wall applications, even in harsh operating conditions.
- Multi-purpose adhesive suitable for bonding different types of claddings, such as ceramics, porcelain stoneware, large thin slabs, including those with reinforced back, clinker, glass or ceramic mosaics, natural or compound stones, including moisture-sensitive stones, on non-traditional surfaces such as metal, wood, fibreglass, PVC and vinyl.
- Product with high deformability and excellent water repellency properties.
- Suitable for one-step waterproofing and installation of ceramic tiles or mosaics in shower enclosures or indoor humid environments.
- Product with ultra-low emission of volatile organic compounds. Compliant with EC1^{PLUS} 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 12004 CLASSIFICATION

Litoelastic EVO FR is a R2T Class high-performance reactive no vertical slip adhesive for interior and exterior floor and wall ceramic tiling. Its compliance with harmonized standard EN 12004 is reported on the CPR-IT207 Declaration of Performance, pursuant to the European Regulation for construction products (CPR - Construction Products Regulation No.: 305/2011/EU) and tested by a European body notified as per certification system 3.

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 buckets (A + B) 500 kg pallet

INTENDED USE

Suitable for bonding any type of ceramic tiles, porcelain stoneware, thin slabs with and without reinforced back, glass and ceramic mosaics, all types of natural stones, including moisture-sensitive stones, such as green marble, slate and pietra serena, resin agglomerates, thin and flexible stone slabs with polyester and fibreglass support for indoor and outdoor installation on floors and walls, either on traditional or elastic and vibrating supports, such as wooden panels, metal surfaces and lightweight panels. 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:

- Bonding of ceramic tiles and mosaics on wooden kitchen tops;
- Bonding of ceramic tiles, mosaics and natural stones on metal surfaces for the construction of prefabricated bathrooms;
- Bonding of natural stones, including moisture-sensitive stones and those subject to staining;
- Bonding of ceramic tiles, mosaics, reinforced slabs, natural stones or resin agglomerates overlapping old ceramics or marble-chip tiles;
- Bonding of ceramic tiles, thin reinforced slabs, mosaics, natural stones or resin agglomerates on heated floors;
- Bonding of mosaics on structures and templates of extruded polystyrene panels used in Turkish baths, hammams and wellness centres;
- Bonding of ceramic tiles and mosaics in swimming pools and whirlpool tubs with traditional structures in concrete, AISI 316 steel and fibreglass;
- Bonding of ceramic tiles and mosaics in swimming pools, including on surfaces waterproofed with Elastocem, Coverflex or Aquamaster;

SUITABLE SUBSTRATES

Cement screeds, Litocem/Litocem Pronto screeds, sulphate (anhydrite) screeds, levelling with Litoliv S40 EcO, Litoliv Extra 15, Litoliv Express, Litoplan Smart, concrete structures cast on site or prefabricated, substrates waterproofed with Elastocem, Coverflex or Aquamaster, surfaces coated with resinous decorative systems



(after sanding), cement plasters, lime/cement plasters, gypsum plasters, wood or metal panels, fibreglass, PVC, vinyl, hardwood floors, existing ceramic or natural stone tiles and lightweight panels.

INSTALLATION PLANNING

The only way to guarantee the long-lasting performance of ceramic installations is to properly plan the process. Therefore, we recommend consulting the national standards in force in each country, such as UNI 11493 standards for Italy, which provides the necessary information concerning choice of materials and correct design, use and installation, in order to ensure the achievement of the required levels of quality, performance and durability. Some of the general precautions that need to be followed are listed below as an example.

Substrates

Before installation, check that substrates are clean, free of loose fragments, properly dried and cured, flat and level, and that mechanical resistance requirements based on the intended use have been met.

Worksite conditions

At the time of application, check that temperature, humidity, light, etc. at the worksite are adequate.

Materials

Check that all materials used for tiling (ceramic materials, levelling systems, adhesives, grouts, waterproofing products, etc.) are suitable for the intended use and have been correctly stored.

Expansion joints

Check that the perimeter, expansion, divider and structural elastic joints have been correctly designed and prepared. Divider joints are normally needed for 20/25 m² indoor sections, and 9-15m² outdoor sections. For exteriors, make sure joints are properly waterproofed and sealed.

Back-buttering

In the case of outdoor installation, and on swimming pools, large spaces, high- or heavy-traffic floors, thin slabs, vibrating substrates and where temperature fluctuations are expected, it is necessary to apply the adhesive both on the substrate and on the back of the tiles, in order to obtain a full adhesive layer without gaps.

Joints

In any type of ceramic tiling, suitably sized joints must be created based on the following parameters:

- type, format and size tolerance of tiles;
- thermal expansion coefficients of the tiling materials being used;
- mechanical properties of installation materials;
- Location and path of joints;
- Mechanical characteristics of the substrate;
- Environment of use and expected operating conditions.

JOINT--FREE INSTALLATION IS NOT PERMITTED.

Any plastic spacers must be removed before grouting.

MIX RATIO

Part A 92.6 parts by weight

Part B 7.4 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 all risk of mixing errors.

APPLICATION

Apply the product with a notched trowel. The trowel notch size will depend on the size of the tiles. In any case, it must allow a backwash of 65-70% in the case of indoor installation, and 100% in the case of outdoor installation, for floors subject to heavy traffic or mechanical stress, and for swimming pools.

In the case of simultaneous waterproofing and installation of ceramic material or mosaics in shower enclosures or humid indoor environments, a layer of at least 1 mm of product must be applied onto the area to be waterproofed. After hardening (about 24 hours), apply the adhesive with a notched trowel to install ceramic material.

TILE INSTALLATION

Tiles are laid on the adhesive, applying pressure to ensure contact with the adhesive, which must be used within a maximum period of 50 minutes after mixing. At normal temperature and humidity conditions, the product has a working time of approximately 1 hour. The working time is shortened at high temperatures, or otherwise extended at low temperatures. The tiles must be laid with joints of a width suitable for their size. During installation, it is necessary to work around expansion or splitting joints, if any. Leave a 5 mm space in between tiles and walls, or any surface elevation. The ceramic surface must be protected for at least 24 hours from any leaching. Tiled surfaces can be put into operation after about 7 days.

GROUTING

In the naval sector, the joints between the tiles can be sealed after about 24 hours only with the specific grout with limited flame propagation EpoxyÉlite EVO FR. For uses in other sectors, it is possible to use cement-based grouts like Litochrom 0-2, Litochrom 1-6, Litochrom 3-15, Monomix, ready-to-use polymeric mortar or two-part epoxy grouts Starlike® or EpoxyÉlite EVO.

WARNINGS

- Do not add lime, cement, water or solvents to the product.
- Apply the product at temperatures between +10°C and +30°C.
- Do not apply the product on damp surfaces or surfaces subject to rising damp.
- 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 sectors, any type of ceramic tiles, natural stones, glass or ceramic mosaics, resin agglomerates, thin slabs with and without reinforced back, and thin and flexible stone slabs with polyester and fibreglass support must be installed with a reactive two-part, improved, no vertical slip R2T class adhesive, pursuant to EN 12004, like Litoelastic EVO FR produced by Litokol S.p.A.



IDENTIFICATION DATA

Appearance	Part A: thick paste Part B: liquid
Colour	Part A: bianco Part B: trasparente paglierino
Classification as per EN 12004	R2T - Improved reactive no vertical slip adhesive
IMO Certification Res. MSC.307(88)-(2010 FTP Code)	Certificate no. MED311618CS/001 issued by <i>RINA Services S.p.A.</i>
Customs code	35069190
Shelf life	24 month in original packaging Keep away from frost

APPLICATION DATA

Mix ratio	Part A 92.6 parts by weight Part B 7.4 parts by weight			
Pot life	About 1 hour at T=+23°C			
Application temperatures allowed	From +10°C to +30°C			
Bonding time	About 1 hour			
Cleaning of equipment and residues	With water and Scotch-Brite™ pad, with fresh product. Once hardened, only mechanical cleaning.			
Consumption	2 mm trowel 1.1 kg/m ²	3.5 mm trowel 1.8 kg/m ²	8 mm trowel 3 kg/m ²	10 mm trowel 3.5 kg/m ²
Walk on time	About 24 hours at T=+23°C			
Ready for use	7 days			
Ready for grouting	Approx. 24 hours			

PERFORMANCE

Initial shear adhesion	≥ 2 N/mm ²	
Shear adhesion after water immersion	≥ 2 N/mm ²	EN 12003
Shear adhesion after thermal shock	≥ 2 N/mm ²	
Open time	≥ 0.5 N/mm ² after 50 minutes	EN 1346
Slip resistance	≤ 0.5 mm	EN 1308
Deformability	Highly deformable	
Temperature of use	From - 40°C to +100°C	
Resistance to acids	Good	
Resistance to alkalis	Good	



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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