Multifondo EVO

TWO-COMPONENT EPOXY SKIM COAT SUITABLE FOR OVERLAYING AND UNDERFLOOR HEATING. ZHERORISK TECHNOLOGY OFFERS VERY LOW VOLATILE ORGANIC COMPOUND EMISSION RATE.

DESCRIPTION

Multifondo EVO is a white epoxy structural primer ideal for smoothing and leveling substrates before applying the Wall and Floor" SpazioContinuo® and Starlike® Decor decorative systems.
It has high elasticity and excellent adhesion on absorbent and non-absorbent substrates.

ADVANTAGES / FEATURES

- Product exhibiths Very low volatile organic compound (VOC). Complies with the most stringent Global Air Quality Regulations.
- Suitable for installation on heating screeds
- Suitable for overlaying on existing flooring
- Extended pot life of mix (about 60 minutes), which facilitates application on large surfaces
- No restrictions for transport over road, sea, air and rail
- White color, which enhances the coloring of the Spaziocontinuo® textures and of Starlike® Decor without altering the original shade
- Product with excellent fluidity and easy to spread
- Easy to sand
- Selected granulometry allowing excellent anchorage of the decorative leveling layer made with Starlike® Decor and Spaziocontinuo®
- The high opaque effect makes it possible to even the surface of the substrate, covering any slight unevenness and color differences
- Excellent adhesion on absorbent and non-absorbent substrates
- Ideal for the sealing of static joints or cracks
- Suitable for repairing any cracks or fissures in cement screeds, by sprinkling 1/50" - 1/24" (0.4-1 mm) grain size quartz sand on the surface when still wet before applying adhesives, self-levelers or skim coats and waterproofing membranes.

INTENDED USE

Intended uses
Interiors and exteriors
Floors and walls
Underfloor heating
Overlaying on existing floors and coverings in ceramic, porcelain stoneware, mosaics, agglomerates, natural stones and parquet
Residential, public, commercial building
Indoor wet areas (bathrooms, shower enclosures)
Covering of furniture and structures in wood, metal or plastic
Sealing of static joints and cracks on cement screeds

Suitable substrates
Cement screeds
Self-levelers
Skim coats
Lightweight panels (such as WEDI-SCHLÜTER).
Decoupling membrane
Underfloor heating systems
Concrete
Normal and waterproof gypsum
Fiber cement slabs (such as Aquapanel)
Gypsum and anhydrite
Existing floors and coverings in ceramic, porcelain stoneware, mosaics, agglomerates, natural stones and wood
Rough cement plaster
Wood panels
Metal
Smoothed concrete
Fiberglass
Smooth cement panels

PACKAGING

11lb (5 kg) bags (A: 10.29lb + B:0.73lb) (A: 4.669 kg + B:0.331 kg)

RESIN DECORATIVE SYSTEM PLANNING

The only way to guarantee the long-lasting performance of resin decorative systems is to properly plan the process. It is therefore advisable to consult the national regulations in force in each country, for example standard UNI 10966 for Italy, which defines the planning and installation criteria for resinous systems for interior and exterior horizontal and vertical surfaces.
Some of the general precautions that need to be followed are listed below as an example.

ANALYSIS OF SUBSTRATE

Vapor barrier/retarder

Make sure the vapor barrier or retarder has been properly positioned under the substrate and is able to prevent rising damp that may damage the resin covering.

Curing

In order to be considered dimensionally stable, a substrate must be sufficiently cured.
Indicatively, concrete substrates need about 6 months to cure, screeds or cement plasters need about 7 days per centimeter (inch) of thickness, and ready-mixed products depend on the manufacturer's instructions.

Integrity and compactness

Assessed by visual inspection. A cement screed must be consistent and compact for its entire thickness.
The substrate must show no signs of cracks or rifts, nor of any brittle parts becoming detached.
Any cracks must be sealed using epoxy mortars, while the loose parts must be removed and the surface repaired using suitable cementitious levelers or skim coats.
In the case of pre-existing floor or wall coverings composed of ceramic and porcelain tiles, agglomerate or natural stone coverings, a tap test must be performed to check for proper adhesion.
No hollow points must be found when the surface is tapped. Any loose material must be removed.

Surface resistance

Its evaluation is very important insofar as surface layers that are not suitably resistant may cause the resin covering to detach.
An empirical assessment consists in etching the surface with a steel nail so as to form approximately 2 x 2 cm (0.79 x 0.79in) squares.
The surface resistance is considered acceptable if the incisions are not deep and do not produce a crumbling effect.
The surface resistance of a cementitious substrate can be repaired using suitable impregnating and consolidating primers, after first evaluating their compatibility with the resin covering.

Planarity

The substrates must not have any irregular curves, whether concave or convex, greater than 3 mm (0.12in).
Planarity is tested in various points of the surface by resting a 2 meter ruler on the surface and measuring the tolerance with a thickness gage.
Any deviations can be corrected with suitable self-levelling or smoothing products.

Surface finish

In general, substrates on which a low thickness resin covering will be applied must be smooth or have a maximum roughness of ± 1/16" (± 1 mm).

Humidity content

The maximum humidity value allowed for the substrate is 3-3.5% for a cementitious substrate and 0.5% for an anhydrite screed.

Cleaning

The surface of the support must always be clean, free from contaminating agents such as cement laitance, grease, release agent oils, residues of varnishes, paints, adhesives, etc.
In the presence of these contaminants, it is necessary to remove them with suitable detergents or mechanical means depending on the nature of the substrate and the type of dirt.

Treating of joints

Any joints must be scrupulously planned and treated.
They can be of different types, but fall into one of two categories: static or dynamic joints.
The former must always be grouted with Multifondo EVO and reinforced with 2 x 2 mm (0.079 x 0.079in) mesh.
Dynamic joints, insofar as structural joints, must be respected (these can be closed using mechanical joints or elastomeric sealants).

CHOICE OF SUITABLE RESIN SYSTEM

A resin system must be chosen based on the client needs and in line with the future intended use of said system.
It is therefore necessary to consider: the type of mechanical stress to which it will be subjected, the type of chemical agents and frequency with which it will come into contact with them, and the possibility of wet areas such as bathrooms or showers.

PREPARATION OF SUBSTRATES

The substrates must be clean, solid, compact, crack-free, properly cured and without rising damp.
Smooth substrates, e.g. smoothed concrete, cementitious self-levelers, smooth cement panels and wood panels must be sanded and then, vacuumed (in this case, do not apply the consolidating primer)

- Excessively porous and absorbent or powdery substrates must be treated with the consolidating primer Fissativo Universale EVO
- Floor and wall coverings in ceramic, porcelain stoneware, mosaics, agglomerates and natural stone must be suitably sanded or degreased with specific detergents, such as Litoscrub EVO
- In the case of anhydrite screeds, check for the presence of a suitable vapor barrier in order to prevent rising damp. Use a carbide method hygrometer to check that the residual humidity is less than 0.5%. The surface must be sanded and treated with Fissativo Universale EVO
- Any cracks, fissures and static joints must be grouted with Multifondo EVO and reinforced with 1/12" x 1/12" (2 x 2 mm) reinforcing mesh
- Pre-existing paint or varnishes must be removed and the substrate treated with Fissativo Universale EVO
- Lime-, cement- or gypsum-based surface finishes applied with a low thickness must be removed and the substrate must be treated with Fissativo Universale EVO
- Uneven cementitious substrates can be leveled with Litoplan Rapid or Litoplan Smart, fast-drying thixotropic cementitious levelers
- In the case of plaster walls, check that a correct “reinforced” grouting has been performed with self-adhesive mesh or micropore paper tape and apply a coat of Fissativo Universale EVO with a brush or roller only on plaster-based grouting of the joints between panels

In the case of lightweight panels, such as WEDI or Schlüter, check that the joints between panels have been previously reinforced through the application of a self-adhesive mesh (non-reinforced junctions will need to be reinforced by inserting the Litoband SK NET inside the Multifondo EVO). Fissativo Universale EVO does not need to be applied to these panels

- Wood structures or furniture must be roughened with a sander fitted with 120-180 grit sandpaper to open the surface pores or to completely remove any old layers of paint, varnish or enamels (do not apply Fissativo Universale EVO)
- If Fissativo Universale EVO has been applied, wait until completely dry (about 3-5 ore at T=+23°C/73.4°F), before applying Multifondo EVO

Multifondo EVO must be sanded with 60-80 grit sandpaper.
In any case, the respective technical data sheets must be consulted for correct use of the indicated products.

MIX RATIO

Component A 93.4 parts by weight – Component B 6.6 parts by weight.
Note: The two components are pre-batched in their respective packaging.

PREPARING THE MIX

Pour part B (catalyst) onto part A (paste).
We recommend pouring all the catalyst contained in the bag.
Mix, preferably using an electric drill with mixing paddle at low speed (≈ 300/min.) until a consistent mix is obtained without lumps.
Hand mixing is not recommended.
The two components are pre-batched in their packaging, thus preventing mixing errors.
Scrape the sides and the bottom of the container, using a steel trowel, to make sure that all the parts of the product are catalyzed.
The mix has a pot life of approximately 60 minutes at a temperature of about 23°C (73.4°F).
If the surface is small, it is possible to partially mix the components and avoid waste.
In these cases, it is recommended to use precision scales and to mix the components respecting the mixture ratio.

APPLICATION

Apply a layer of product and level down to a minimum skim coat using a smooth steel trowel with rounded edges and corners, (Stainless steel trowel 20x8 art. 201T0001 or Stainless steel trowel 24x11 art. 102PRO0001).
If applied on new cementitious or anhydrite screeds, new cementitious or gypsum-based untreated plasters, smoothed concrete, plasterboard panels or lightened panels (WEDI-SCHLÜTER), cementitious self-levelers, smooth concrete or wood panels, apply the mixture using the SUPERFLEX STAINLESS STEEL trowel (Art. 203I0001) directly on the suitably prepared substrate (see “Preparation of the substrates”), creating a leveling layer of about 1 mm.
In the case of slightly irregular supports, it may be necessary to apply an additional coat of Multifondo EVO in order to even the surface.
When overlaying on existing floors and coverings in ceramic, porcelain stoneware, mosaics, agglomerates, natural stones and in the case of old, deteriorated and "lined” screeds or plaster, two coats of Multifondo EVO must be applied, embedding the 2 x 2 mm (0.079 x 0.079in) anti-alkaline fiberglass reinforcing mesh in the first coat.
Allow at least 12 hours between the first and possible second coat and, in any case, the first layer must be hard and the surface scratch resistant.
Once the final coat has set, i.e. at least 12 hours after application, it is possible to manually or mechanically sand with 60-80 grit sandpaper, preferably light-colored.
The purpose of sanding is to eliminate any ridges or grooves and obtain a smooth surface.
Then, remove the dust that forms with a suitable vacuum cleaner.
When correctly applied, the product will completely hide the underlying layer.
The base coat allows the obtainment of a white colored surface with consistent absorption by the substrate for the

subsequent application of Spaziocontinuo® or Starlike® Decor.

FOCUS

Underfloor heating

After at least 4 days from installation of the screed developed with Litocem or Litocem Pronto, the heating system can be used with a variable supply water temperature between +20°C (68°F) and +25°C (77°F), kept constant for at least 3 days.

Then set the maximum design temperature and hold it for another 4 days. At the end of this cycle, bring the screed back to ambient temperature and install the covering (see standard EN 1264-4).

Steps

Insert the NAF 150002 reinforcing profile by embedding it in the first coat of Multifondo EVO in line with the external corners of the step.

If the staircase is not in concrete, we recommend reinforcing the entire step by inserting the 2x2 mm mesh in the first coat of Multifondo EVO.

Corners

Internal corner - If it is necessary to reinforce the corner of a wall, embed the Litoband SK Net band in the first coat of Multifondo EVO.

External corner - If it is necessary to reinforce the corner of a wall, embed the reinforcing corner profile NAF 150002 in the first coat of Multifondo EVO.

Joints

During application of the first coat of Multifondo EVO, the static joints can be sealed at the same time.

- insert the Litogap expanded polyethylene tubing inside the joint (positioning it at a depth no less than the width of the joint itself).

Then, fill the joint with Multifondo EVO and apply the Litoband SK NET micropore reinforcing band, taking care to embed it in the leveling layer created with Multifondo EVO.

LIMITATIONS

- Avoid storing the product in cans/buckets under direct sunlight or in very warm environments
- In warm climates, keep the packaged product in a cool and dry place away from the sun before use
- Respect the mix ratio
- Do not mix the product with water or solvents
- Do not add lime, cement or other foreign materials to the product
- Do not mix partial quantities of the components without using a scale; different mix ratios will compromise the proper setting of the product
- Spread the product at temperatures between 40°F and 90°F
- The pot life is about 60 minutes at a temperature of 73.4°F (+23°C). Be sure to mix only the quantity of product that can actually be used within this period of time
- The temperature of the substrate must be at least 37.4°F (3°C) higher than the dew point
- Do not use on heating substrates that have not been properly prepared; on substrates subject to rising damp or with a residual humidity greater than 3-3.5% CM; on substrates in anhydrite with a residual humidity greater than 0.5% CM; on substrates in anhydrite with heating systems and residual humidity greater than 0.2% CM
- Do not use the product on damp substrates or substrates with rising damp phenomena
- Do not use on dirty or inconsistent surfaces
- Do not use on pre-existing varnishes, paints or enamels
- Do not use on low thickness lime, cement- or gypsum-based surface finishes
- Do not use on surfaces that are not fully cured and on substrates that have not been properly prepared
- During the winter, setting times may be significantly longer, therefore check that the surface of the coat is not sticky before any further leveling
- Do not use on PVC, laminates and linoleum
- Protect the product against water for at least 24 hours after installation
- If paper tape or gummed paper is used to delimit the areas or protect the surfaces, they must be removed while the product is still fresh
- Do not use the product for applications not stated in this technical sheet
- If in doubt, contact the Litokol S.p.A Technical Help Service.

SAFETY INFORMATION Consult the product safety data sheet, available on request.
PRODUCT FOR PROFESSIONAL USE

IDENTIFICATION DATA

Appearance	Component A: white paste
Appearance	Component B: thick amber liquid
Customs code	35069190
Shelf life	24 months in original packaging in a dry place.

APPLICATION DATA

Mix ratio	Component A: 93.4 parts by weight
Mix ratio	Component B: 6.6 parts by weight
Appearance of mix	Thixotropic paste
Specific gravity of mix	1.7 kg/dm^3 (3.75lb/in^3)
Pot life	Approx. 60 minutes
Application	Superflex Stainless steel trowel art. 203I0001
Acceptable application temperatures	From 23°F to +86°F (+5°C to +30°C)
Permissible relative ambient humidity	< 80%
Waiting time between coats	12 hours
Waiting time for overlaying	12 hours
Serviceability Temperatures	From -22°F to +176°F (-30°C to +80°C)
How to clean equipment	With water when product is fresh. Mechanically when product has set.
Consumption	

PERFORMANCE

Standard	SR	UNI EN 13813
Resistance to abrasion/wear	AR 1	UNI EN 13892-4
Resistance to knocks/impact	IR 7	UNI EN ISO 6272-1
Adhesion to substrate	B>2.0	UNI EN 13892/8
Static load	PS 2	UNI 8298-3
Resistance to UV rays	Excellent	ISO 11341
Shrinkage	≤ 1.5 mm/m (≤ 0.059in/yd)	EN 12808-4
Elastic modulus	> 4000 Mpa (> 609.158 psi)	Internal method
Resistance to humidity	Excellent	
Resistance to temperature fluctuations	Excellent	
Resistance to aging	Excellent	

NOTES

Data detection at temperature +73.4°F (+23 °C), R.H. 50% and with no wind. May vary depending on the specific conditions of the installation site.

Form **n. 1001**
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The information and provisions contained in this technical data sheet reflect our best experience. Given the impossibility of directly intervening on the conditions of the work site and execution of the works, they represent indications of a general nature, which are in no way binding on our Company. It is therefore advisable to perform a spot test to check the suitability of the product for the intended use. In any case, users must determine whether or not it is suitable for the intended use and shall assume all associated responsibility.

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