



GRIGOKOLL® OMNIX



Two-component epoxy-polyurethane adhesive, thixotropic, waterproof, featuring high mechanical performance, excellent deformability and reduced vertical slip, specifically designed for the installation of ceramic tiles and natural stone coverings.

Product Description

Reactive epoxy-polyurethane adhesive (R) with improved performance (2) and glide-resistant properties (T), specifically designed for the installation of ceramic tiles, mosaics, natural stone and cement- or resin-based agglomerates that are moisture-sensitive or prone to staining. A highly deformable adhesive, free from water and solvents, suitable for bonding ceramic tiles of all types, sizes and thicknesses, as well as natural stone, onto substrates such as wood, steel, metal sheet, OSB, linoleum and PVC, including unstable substrates subjected to high mechanical stress, movement, vibration and dimensional changes. GRIGOKOLL® OMNIX forms a waterproof adhesive layer and therefore performs both waterproofing and bonding functions simultaneously. Professional-use product.

Area of use

indoor- outdoor

Application

Floor
Wall
Ceilings

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Intended use

Suitable for the installation of ceramic tiles and natural stone in:

Residential buildings
Offices and public buildings
Supermarkets and shopping centres
Balconies, terraces and flat roofs
Laboratories and technical rooms
Wellness centres and spa facilities
Façade cladding systems
Public squares, pavements and pedestrian walkways

Compatible Substrates

Cast-in-place or precast concrete, provided it is dry and fully cured ($RH \leq 3\%$)
Traditional cement-based screeds and self-levelling screeds
Traditional or premixed cement-based renders and plasters (tensile adhesion strength $R_{ta} \geq 1$ N/mm²)
Existing ceramic, stone or resilient floor coverings suitable for direct overlay installation
Cement-based screeds incorporating underfloor heating and cooling systems
Fibre-cement boards
Anhydrite, calcium sulphate and gypsum-based screeds and plasters, provided they are treated with Primer WD at least 6 hours before installation
Wood, parquet, OSB, plywood, steel, sheet metal, PVC, rubber and linoleum
Natural stone and engineered materials sensitive to moisture, staining or dimensional deformation

Unsuitable Substrates

Cast-in-place or precast concrete that is deteriorated, dimensionally unstable, insufficiently cured, or exhibiting a residual moisture content exceeding 3% ($RH > 3\%$)
Substrates affected by rising damp (capillary moisture)
Cracked substrates
Weak, friable or mechanically unsound substrates
Dimensionally unstable substrates
Insufficiently cured substrates
Damp substrates with a residual moisture content exceeding 3% ($RH > 3\%$)

Suitable for the Installation

- Single-fired ceramic tiles, Double-fired ceramic tiles, Majolica tiles, Terracotta tiles, Stoneware tiles, Porcelain stoneware, Marble-effect porcelain stoneware, Clinker tiles, Ceramic mosaics, Glass mosaics, Natural stone, Resin-based engineered stone materials, including moisture-sensitive and stain-prone products, Cement tiles

Not Suitable for Bonding

- Ceramic tiles, ceramic or glass mosaics, or natural stone subjected to continuous water immersion, such as in swimming pools, fountains, tanks or water reservoirs.
- Transparent glass mosaics exposed to ultraviolet (UV) radiation.
- Porous or light-coloured natural stone with a very thin cross-section, when exposed to ultraviolet (UV) radiation, due to the potential risk of visible alterations or aesthetic changes.

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Substrate Requirements

Substrates must be fully cured, sound, mechanically resistant, intact and dimensionally stable.

Surfaces must be clean and free from dust, dirt, grease, oils, paints, resins, waxes and release agents.

Substrates must be sufficiently dry, with a maximum residual moisture content of $\leq 3\%$. The maximum moisture level is established by UNI 11371 and UNI 11493 and shall be measured using a carbide hygrometer in accordance with UNI 10329.

Screed types

Cement-Based Screed (CT)	Without underfloor heating/ cooling system	$\leq 3\%$
	With underfloor heating/cooling system	$\leq 3\%$ (after heating cycle / thermal shock test)
Anhydrite Screed (CA)	Without underfloor heating/ cooling system	$\leq 0,5\%$
	With underfloor heating/cooling system	$\leq 0,3\%$ (after heating cycle / thermal shock test)

In all cases, installation shall be carried out only on cement-based screeds that have been cured for at least 28 days, unless special rapid-drying, normal-setting and controlled-shrinkage screed products manufactured by Fornaci Calce Grigolin S.p.A. are used, such as MIXCEM PRONTO, MIXCEM FIBRATO, MIXCEM STEEL, BASEMIX, or screeds prepared with BASEFORTE® LR 30.

Application Conditions

from $+10^{\circ}\text{C}$ to $+30^{\circ}\text{C}$

Mix Preparation

Pour Component B (hardener) into Component A (epoxy-polyurethane resin), ensuring that the entire contents of Component B are transferred from its container.

Mix thoroughly using a low-speed electric mixer until a homogeneous consistency and uniform colour are obtained.

The two components must be completely blended before application to ensure the product achieves its specified performance characteristics.

Waterproofing Layer

Optional

Using the smooth side of a trowel, apply an initial coat of OMNIX to ensure perfect adhesion to the substrate.

Then comb the material with a 3 mm or 5 mm notched stainless-steel trowel to obtain a uniform adhesive layer with a minimum thickness of 2 mm, serving as a waterproofing layer. Allow the waterproofing coat to fully cure for approximately 24 hours before applying the subsequent adhesive layer for tile installation.

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Adhesive Application

Use a stainless-steel notched trowel with a notch size appropriate to the tile format in order to achieve a continuous and fully supported adhesive bed.

Using the smooth side of the trowel, apply an initial coat of OMNIX to ensure optimum adhesion to the substrate. Then use the notched side of the trowel to apply a sufficient quantity of adhesive to achieve complete wetting and full bedding of the tile.

The buttering-floating method (double adhesive application), ensuring complete adhesive coverage and full bedding, shall be carried out by applying OMNIX both to the substrate and to the back of the tile in the following cases:

- Exterior floor and wall installations with tiles larger than 30 cm
- Interior floor and wall installations with tiles larger than 60 cm
- Installation of thin porcelain stoneware, particularly large-format tiles
- Installations over heated or cooled screeds and renders
- Tiles subjected to heavy loads, vibration, or severe service conditions

Check that the applied adhesive has not developed a surface skin that could impair proper wetting of the tile. If a surface film has formed, re-comb the adhesive with the notched trowel before installation.

If the adhesive has already started to react and cure, remove the affected material completely and replace it with freshly mixed adhesive before proceeding with installation.

Maximum Adhesive Thickness

5 mm

Consumption

1,5 kg/m² per mm of thickness.

Specification

Installation of interior and exterior floor and wall coverings in accordance with UNI 11493-1 and UNI 11714-1, including ceramic tiles, porcelain stoneware, ceramic or glass mosaics, natural stone, engineered stone, and large-format tiles, including thin porcelain slabs, in residential buildings, public facilities and commercial premises.

The installation shall be carried out using a waterproof reactive epoxy-polyurethane adhesive, featuring high mechanical performance, reduced vertical slip, high deformability, and free from solvents and water, such as GRIGOKOLL® OMNIX manufactured by Fornaci Calce Grigolin S.p.A., classified as R2T in accordance with EN 12004.

Substrates shall be fully cured, sufficiently dry (residual moisture content $\leq 3\%$), sound, mechanically resistant, intact and dimensionally stable.

Suitable movement joints with a minimum width of 8 mm shall be incorporated into the floor covering and shall coincide exactly with the underlying screed movement joints.

For exterior flooring, the maximum uninterrupted area shall not exceed 10 m², subdivided into regular-shaped panels measuring approximately 3 × 3 m or 4 × 2.5 m.

Movement joints shall be sealed using a suitable silicone or polyurethane sealant.

For interior flooring, the maximum uninterrupted area shall not exceed 25 m², subdivided into regular-shaped panels measuring approximately 5 × 5 m or 6 × 4 m.

Tile joints shall be grouted using a high-performance cementitious grout with reduced water absorption, such as FUGASTYLE CEM 1_8 manufactured by Fornaci Calce Grigolin S.p.A., classified as CG2WA in accordance with EN 13888.

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Warnings

Apply only on substrates that are clean, sound, compact, fully cured, intact, crack-free and dry. Smooth or wax-treated surfaces, as well as particularly smooth and non-absorbent substrates such as cement tiles, marble, natural stone and engineered stone, must be properly prepared by suitable mechanical abrasion prior to installation.

Do not install on substrates exposed to direct sunlight, with standing water, or in the presence of ice or frost.

Strictly observe the 9:1 mixing ratio between Component A and Component B. Any variation from the specified ratio may result in incomplete curing and failure of the product to achieve its intended performance.

When using only part of the packaging, the components must be weighed using a precision scale to ensure the correct 9:1 mixing ratio is maintained.

Do not apply on damp substrates or in the presence of rising damp (capillary moisture) from the substrate.

When installing over cracked, unstable or insufficiently cured substrates, an appropriate uncoupling membrane shall be used to isolate the floor covering from substrate movements.

Low temperatures increase the viscosity of the adhesive and extend curing times, reducing workability during application. Store the product in temperature-controlled environments. Do not use at temperatures below +10°C.

Where underfloor heating or cooling systems are present, installation of the floor covering shall only take place after completion of the system commissioning and heating cycle (thermal shock test) in accordance with UNI EN 1264-4.

For installations over underfloor heating or cooling systems, the buttering-floating method (double adhesive application) shall be used to ensure complete bedding of the tiles and to maximise both mechanical performance and thermal efficiency of the floor covering.

Protect the installed flooring from rain, water exposure, frost and direct sunlight for 24–48 hours after installation.

Always consult the Safety Data Sheet (SDS) before use to ensure the product is handled and applied safely and correctly.

For all matters not expressly specified herein, reference shall be made to good construction practice and the applicable technical standards.

- UNI EN 13813 – Screed material and floor screeds – Screed materials – Properties and requirements.
- UNI 11371 – Screeds for parquet and wood flooring – Properties and performance characteristics.
- UNI EN 10329 – Installation of floor coverings – Measurement of moisture content in cementitious or similar substrates.
- UNI EN 1264-4 – Water-based surface embedded heating and cooling systems – Part 4: Installation.
- UNI 11493-1 – Ceramic tiling for floors and walls – Part 1: Guidelines for design, installation and maintenance.
- UNI 11714-1:2018 – Natural stone cladding for horizontal, vertical and ceiling surfaces – Part 1: Guidelines for design, installation and maintenance.

Packaging

Bucket 10 kg

Component A: 9 kg

Component B: 1 kg

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Storage

Shelf life: 12 months from the date of manufacture.

Store in a temperature-controlled environment at temperatures between +10°C and +35°C.

Protect the product from heat sources, direct sunlight and frost.

Keep the packaging tightly sealed and undamaged.

Use the product before the expiry date indicated on the packaging.

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TECHNICAL DATA			
Reference Standards		UNI EN 12004	
Product Classification		R2T	
PREMIXED POWDER			
Appearance		component A - Creamy paste Component B - Liquid Mixed adhesive - Viscous paste	
Color		extra white	
Solid Content		100%	
Mixing Ratio		Component A: 9 kg; Component B: 1 kg	
Brookfield Viscosity at 20°C (mixed product)		2.500.000 (mPa*s)	
Density of the Mixed Adhesive		1,50 kg/dm³	
Open time at 23°C		40 minutes	
Adjustment Time at 23°C		50 – 60 minutes	
Pot Life at 23°C		60 – 90 minutes	
PERFORMANCE CHARACTERISTICS			
Property	Test method	Requirement	Result
Initial shear adhesion	EN 12003 clause 7.2	≥ 2,0 N/mm²	3,5 N/mm²
Shear adhesion after water immersion	EN 12003 clause 7.3	≥2,0 N/mm²	3,0 N/mm²
Shear adhesion after thermal shock	EN 12003 clause 7.4	≥ 2,0 N/mm²	3,5 N/mm²
Slip	EN 12004 clause 8.2	≤ 0,5 mm	≤ 0,5 mm
Reaction to fire class	EN 12004	declared value	Class E CWFT
APPLICATION DATA			
Light foot traffic		10 – 18 hours	
Final cure		16 – 24 hours	
Grouting of joints	wall	4 - 8 hours	
	floor	24 - 48 hours	
Ready for service		7 days	
Floor grinding and polishing		14 days	
Service temperature		from -30°C to +80°C	
INSTALLATION REQUIREMENTS			
Structural Joints		Structural joints must be strictly respected and therefore maintained unchanged through both the screed and the finished floor covering. They shall be carried through the entire flooring system and must not be bridged or obstructed.	
Perimeter Joint (UNI 11493-1)		Perimeter joints shall be provided along all walls, columns, thresholds, vertical elements and fixed structures. The joints must be maintained free from rigid materials in order to accommodate dimensional movements of the floor covering and prevent the transmission of stresses to adjacent structures.	

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Movement Joints (UNI 11493-1)

Movement joints shall be designed and installed in accordance with the requirements of UNI 11493-1. They must be incorporated where necessary to accommodate dimensional changes, thermal expansion, shrinkage and structural movements, thereby preventing the development of stresses and cracking in the finished floor covering.

Where underfloor heating or cooling systems are present, the floor covering shall only be installed after completion of the system commissioning and heating cycle (thermal shock test), carried out in accordance with the requirements of UNI EN 1264-4.

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