

Special Eco

Mineral adhesive for high adhesion, high-performance laying of porcelain tiles.

Special Eco has no vertical slip and develops a long adjustability time guaranteeing the laying of diagonal, top-to-bottom ceramic coverings, even at high thicknesses.



1. Floors and walls, for internal and external use
2. Thicknesses up to 15 mm
3. Open and adjustability time ≥ 30 min.
4. No vertical slip
5. Suitable for laying single and double-fired ceramic tiles on mineral or cement-based substrates

Rating 5



- ✓ Regional Mineral $\geq 60\%$
- ✓ Recycled Regional Mineral $\geq 30\%$
- ✓ CO₂ Emission ≤ 250 g/kg
- ✓ VOC Low Emission
- ✓ Recyclable

Areas of application

→ Use

Substrates:

- Cement plasters and cement-lime mortar
- Mineral or cement-based screeds
- Gypsum and anhydrite ⁽¹⁾

(1) After application of Active Prime Fix or Active Prime Grip

Materials:

- Ceramic tiles
- Ceramic mosaic

Uses:

- Floors and walls)
- For internal use - external
- Domestic
- Commercial
- Industrial

Do not use:

- on plasterboard
- on old ceramic floors, marble tiles or natural stone
- on underfloor heating systems
- on highly flexible substrates
- on plastic or resilient materials, metals, timber
- on moistened substrates or substrates subject to moisture rising
- In environments where water is always present
- on organic-based, reactive waterproofing products (such as RM according to EN 1489)

Instructions for use

→ Preparation of substrates

In general, cement-based substrates must be free of dust, oil and grease, dry and free from moisture rising, with no loose or imperfectly anchored parts such as residues of cement, lime and paint coatings, which must be completely removed. The substrate must be stable and without cracks, must have already completed the hygrometric shrinkage curing period and must present suitable mechanical resistance levels. Uneven areas must be corrected in advance with suitable finishing products.

Substrates with weak surface consistency: screeds and plasters which present a weak crystalline structure in the initial mm of thickness and which can be easily abraded must be consolidated by means of Keradur Eco, the eco-friendly, water-based depth consolidant, to be applied with one or more coatings and according to the instructions, until a surface has been obtained which is still absorbent but compact.

Highly absorbent substrates: when laying on screeds and plasters which are compact but highly absorbent, in warm climates and with direct ventilation, it is advisable to apply in advance one or more coatings of Active Prime Fix or Active Prime Grip primers according to the instructions, in order to reduce water absorption and improve spreadability of the adhesive.

→ Preparation

Prepare Special Eco in a clean container, first of all pouring in a quantity of water equal to approximately $\frac{3}{4}$ of the amount required. Gradually add Special Eco to the container,

mixing the paste from the bottom upwards with a low-rev (≈ 400 /min) helicoidal agitator. Add more water until the desired consistency is obtained. The mixture must be of smooth consistency and without any lumps. For best results, and to mix larger quantities of adhesive, a stirring device with vertical blades and slow rotation is recommended. The amount of water indicated on the packaging, is an approximate value and will vary between Special Eco white and grey. It is possible to obtain mixtures with consistency of variable thixotropy according to the application to be made. Adding extra water does not improve the workability of the product, and may cause shrinkage in the plastic phase of drying and result in less effective final performance with a reduction in compressive strength and adhesion to the substrate.

→ Application

Special Eco should be applied with a suitable toothed spreader, to be chosen according to the size and characteristics of the rear surface of the tiles. It is best to use the smooth part of the trowel to spread a fine initial layer, pressing down hard so as to obtain maximum adhesion to the substrate and to regulate water absorption, after which the thickness can be adjusted as required by tilting the spreader at an angle. Spread the adhesive over a surface area which will allow for the laying of the surface materials within the indicated open time, and check for suitability at regular intervals. The open time may vary considerably even during the application, depending on various factors such as exposure to sunlight, air currents, absorbency

Instructions for use

level of the substrate, temperature and relative air humidity. Press any tile sufficiently to ensure complete and even contact with the adhesive itself. In environments subject to heavy traffic and in external locations, use the double-spread technique to ensure 100% application of the product to the rear of the tiles. In general, ceramic tiles do not require preliminary treatment, however these materials should be checked to ensure there are no traces of dust, dirt or surface coatings of any kind that are not properly anchored to the substrate or which may modify the absorbency characteristics of the tiles.

Respect structural, fractionizing, and perimeter joints present in the substrates. Abide by local existing provisions when creating elastic expansion joints.

→ Cleaning

Clean the tools and any residues of the product from the surfaces using water while the adhesive is still fresh. Once hardened, the adhesive can only be removed by mechanical means.

Special notes

→ Special applications: Special Eco's absence of vertical slip allows laying of all types of ceramic tile, starting from the top or diagonally, with considerable precision and speed. The replacement of mixing water with Top Latex Eco, the eco-friendly elastic agent, provides the adhesive with greater capacity of transversal deformation and greater resistance to water and tensile strength without modifying the open and adjustability time. Special Eco with the addition

of Top Latex Eco exceeds the performance required by standard EN 12004 class C2 TE. Consult the Kerakoll Worldwide Global Service to define use of this product in such applications as: laying on deformable substrates, heat-radiant slabs, smoothed, low absorbency or non-absorbent concrete, large-format paving slabs laid in external applications or in permanently damp environments.

Certificates and marks



* Émission dans l'air intérieur Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

Abstract

High-performance laying of ceramic tiles will be carried out with an eco-friendly, single-component, mineral adhesive for high-adhesion laying with no vertical slip compliant with standard EN 12004 - class C1 TE, GreenBuilding Rating 5 (4 Special Eco grey), such as Special Eco by Kerakoll Spa. Substrates must be compact, with no loose, flaky material, clean and fully cured, having already completed the curing period for hygrometric shrinkage. A ____ mm toothed spreader must be used for an average coverage of \approx ____ kg/m². Existing joints must be respected, create elastic fractionizing joints every ____ m² of continuous surface. Ceramic tiles must be laid with joint-gap spacers with a width of ____ mm.

Technical Data compliant with Kerakoll Quality Standard		
Appearance	White or grey pre-mixed	
Pack	25 kg bags	
Shelf life	≈ 12 months from production in the original sealed packaging, protect from humidity	
Thickness	≤ 15 mm	
Temperature range for application	from +5 °C to +35 °C	UNI 11493 - 8.3
Mixing water	≈ 7.9 l / 1 x 25 kg bag	
Pot life	≥ 4 hrs	
Open time	≥ 30 min.	EN 12004-2
Adjustability	≥ 30 min.	
Foot traffic	≈ 24 hrs	
Grouting	≈ 8 hrs on walls / ≈ 24 hrs on floors	
Interval before normal use	≈ 7 days	
Coverage per mm of thickness	≈ 1.4 kg/m ²	

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site, i.e. temperature, ventilation and absorbency level of the substrate and of the materials laid.

Performance

VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions

Conformity	EC 1 plus GEV-Emicode	GEV certified 13981/11.01.02
HIGH-TECH		
Shear adhesion on ceramic biscuit after 28 days	≥ 0.5 N/mm ²	ANSI A-118.1
Tensile adhesion on concrete after 28 days	≥ 1 N/mm ²	EN 12004-2
Durability test:		
- adhesion after heat ageing	≥ 0.5 N/mm ²	EN 12004-2
- adhesion after water immersion	≥ 0.5 N/mm ²	EN 12004-2
- adhesion after freeze-thaw cycles	≥ 0.5 N/mm ²	EN 12004-2
Vertical slip	≤ 0.5 mm	EN 12004-2
Working temperature	from -30 °C to +80 °C	
Conformity	C1 TE	EN 12004

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

Warning

- Product for professional use
- abide by any standards and national regulations
- do not use the adhesive to correct substrate irregularities greater than 15 mm
- lay and press tiles onto fresh adhesive, making sure it has not formed a surface skin
- protect against direct rain and freezing for at least 24 hrs
- the temperature, ventilation and absorption of the substrate and covering materials, may vary the adhesive workability and setting times
- use a toothed spreader suitable for the format of the tiles
- use the floating and buttering method for all external laying
- if necessary, ask for the safety data sheet
- for any other issues, contact the Kerakoll Worldwide Global Service +39 0536 811 516 - globalservice@kerakoll.com



The Rating classifications refer to the GreenBuilding Rating Manual 2013. This information was last updated in December 2022 (ref. GBR Data Report - 01.23); please note that additions and/or amendments to this information may be made over time by KERAKOLL Spa; for the latest version, see www.kerakoll.com. KERAKOLL SpA shall therefore be liable for the validity, accuracy and updating of information provided only when taken directly from its institutional website. The technical data sheet given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building yards and the execution of the work, this information represents general indications that do not bind Kerakoll in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.