



ICC Premiscelati

DIE KOLL BIO C2TE FLEX

PROFESSIONAL MINERAL ADHESIVE WITH GEL-LIKE WORKABILITY, HIGH MECHANICAL PERFORMANCE, ZERO VERTICAL SLIP, AND EXTENDED OPEN TIME, FOR THE INSTALLATION OF ANY TYPE OF CERAMIC TILES, PORCELAIN STONEWARE, AND STONE MATERIALS.



Description

DIE KOLL BIO C2TE FLEX is a white or grey powder adhesive with improved gel-like workability, ideal for high adhesion bonding of ceramic tiles of all types, indoors and outdoors, on floors, walls, and ceilings, in residential, commercial, or industrial environments, even in areas subject to freezing. **DIE KOLL BIO C2TE FLEX** guarantees an extended open time of over 30 minutes, ample setting times, and superior trowel slip thanks to its gel-like effect, which makes installation easier and less tiring. By mixing **DIEKOLL BIO C2TE FLEX** with water, a highly adhesive mortar with strong thixotropy is obtained, ensuring vertical applications without dripping and without allowing the tiles to slip, even large format ones, and allowing installation from top to bottom without the use of spacers. **DIE KOLL BIO C2TE FLEX** is an improved mineral adhesive (C2) with extended open time (E) and zero vertical slip (T) according to the current EN 12004 standard.

Application fields:

DIE KOLL BIO C2TE FLEX is used for high-strength bonding of ceramic tiles and mosaics of any kind, both absorbent and non-absorbent (double-fired, single-fired, porcelain stoneware, clinker, stone materials, etc.), on floors, walls, and ceilings in residential, commercial, or industrial environments, even in areas with heavy traffic. It is suitable for installation on traditional plaster or cement mortar walls, on ordinary or reinforced cement screeds that are sufficiently seasoned and dry, on existing old floors (overlays), on substrates with waterproofing membranes from the **ELASTOFLEX** range, and for the installation of heated floors. It is suitable for installation on gypsum supports and anhydrite screeds after treatment with **ICC GRIP** primer. **DIE KOLL BIO C2TE FLEX** also bonds perfectly to insulation panels made of expanded or extruded polystyrene and mineral fiber panels (rock wool) or equivalent materials, on interior walls or ceilings. For special installations, please consult our technical office.

Preparation of substrates:

The supports must comply with the UNI 11493-1 standard, in particular they must be seasoned and have completed dimensional shrinkage (1 week of maturation for each centimeter of thickness; over 4 cm, 2 weeks are required for each additional centimeter, but in any case, at least 28 days of seasoning), compact and mechanically resistant, free from friable parts, rising damp, sufficiently flat, free from oils, fats, waxes, dust, paints, and dirt in general or anything else that could prevent proper adhesion to the support. The supports must not be subject to shrinkage or movement after the installation of the tiles. Any cracks or fissures must be properly treated. Any depressions or differences in flatness must be corrected. Slightly dusty surfaces can only be covered after treatment with the specific **ICC GRIP** consolidating primer. For installation on sunny or highly absorbent surfaces, it is necessary to pre-wet the substrate by wetting it with clean water half an hour before installation; avoid applying the adhesive on water stagnation areas.

Preparation of mortar:

DIE KOLL BIO C2TE FLEX should be mixed using a mixer or a low-speed drill with a whisk attachment. Mix with clean water in the quantity indicated on the packaging until a creamy, homogeneous, and lump-free mixture is obtained. Let the mixture mature for about 5 minutes. Briefly stir the mortar again and start the installation process. The obtained mortar can be used for approximately 6 hours. The product is not suitable for manual mixing or mixing with a concrete mixer.

Application:

For the application, it is necessary to refer to the Italian standard UNI 11493-1 (§ 7.9/7.11). Optimal adhesion between the tile and the substrate is achieved when the adhesive can cover and adhere to the entire ceramic surface. The choice of notched trowel should vary based on the format, size, and characteristics of the back of the material to be laid. For ceramic coverings, a 5 or 6 mm trowel is recommended; for floors and irregular surfaces or tiles with a highly profiled reverse side, an 8 or 10 mm trowel is recommended. Spread a first layer of adhesive on the substrate using the smooth side of the trowel and then work it with the notched side to achieve the necessary thickness for tile bonding. Cover the surface with adhesive to allow for tile installation within the indicated open time. Under standard environmental conditions, the open time of **DIE KOLL BIO C2TE FLEX** is over 30 minutes; unfavorable conditions (direct sunlight, dry wind, high temperatures, very absorbent substrates) can drastically reduce the open time. Check frequently that the adhesive has not formed a non-stick surface film; if so, re-trowel the product with the notched trowel. It is not necessary to wet the tiles, but in case of tiles with a dusty back, wash them by immersing them in clean water, removing excess water before installation. Press the tiles to ensure uniform and complete contact with the adhesive. In case of large format tiles, exterior installations, especially vertical installations, or heavy traffic flooring, in accordance with **UNI 11493-1** standard, it is essential to use the double spreading technique to fully "wet" the back of the tile. Any tile adjustment can be done within approximately 45 minutes* after installation. The grout between the tiles can be filled after 4-8 hours* on walls and after 24 hours* on floors using sealants compliant with **EN 13888** regulations. The floors can be walked on after approximately 24 hours*, and they can be put into full use after approximately 14 days.

Consumption:

The adhesive consumption varies depending on the flatness of the substrates and the shape of the tiles to be applied: with a 5 or 6 mm trowel, the consumption is approximately 2.5 - 3 kg/m²; with an 8 or 10 mm trowel, the consumption is approximately 4 - 5 kg/m².

TECHNICAL DATA A

Consistency	Grey or white powder
Maximum particle size	0,6 mm
Bulk density (fresh mortar)	Approximately 1,65 gr/cm ³
Mixing water per 25 kg bag	White: 8,2 ÷ 8,7 liters Grey: 7,8 ÷ 8,2 liters
Allowed application temperatures	from +5°C a +35 °C
Working time	Approximately 6 hours*
Maximum achievable thickness	10 mm
Execution of wall joints	After approximately 6 hours*
Execution of floor joints	After approximately 24÷36 hours*
Workability	After 24 hours*
Commissioning	After 14 days*

FINAL PERFORMANCE

Initial adhesion (after 28 days)	1,5 N/mm ² (EN 1348)
Adhesion after thermal aging	1,4 N/mm ² (EN 1348)
Adhesion after immersion in water	1,1 N/mm ² (EN 1348)
Adhesion after 25 freeze/thaw cycles	1,5 N/mm ² (EN 1348)
Open time	0,8 N/mm ² dopo 30 mins (EN 1346)
Tile slip resistance	0,3 mm (EN1308)
Resistance to aging	excellent
Resistance to moisture	excellent
Adhesion to polystyrene panel	≥ 0,1 N/mm ² (Broken panel)
Adhesion to concrete	≥ 1,5 N/mm ²

*Data expressed at (23±2)°C and (50±5)% relative humidity. Lower temperatures prolong maturation and hardening times.

Equipment cleaning:

Wash hands and equipment with plenty of clean water before the adhesive starts to set; afterwards, mechanical means should be used.

Hygiene and safety:

EUH 208 Contains cement. May cause an allergic reaction. The Portland cement contained in the product can cause skin irritations and serious eye injuries. Do not breathe dust, ventilate the area during mixing, and protect yourself adequately with gloves, protective clothing, and goggles. Before use, read the instructions on the packaging carefully and consult the Safety Data Sheet.

Packaging:

DIE KOLL BIO C2TE FLEX is supplied in 25 kg bags on wooden pallets weighing 1500 kg each.

Storage:

Store the product in intact original packaging in cool and dry areas. Do not disperse the dust. Product compliant with DM 10/05/2004. Cr VI content below 2 ppm. The properly stored product should be used within 6 months from the packaging date stamped on the bag.

Specification:

The installation of ceramic tiles on cementitious substrates will be carried out using a mineral adhesive with improved workability and a GEL effect, high performance, and zero vertical slip, belonging to class C2TE according to EN 12004 standard (type **DIE KOLL BIO C2TE FLEX by Industria Calce Casertana Srl**). The installation can take place after 14 days.

Warnings:

Always follow the instructions dictated by current regulations. For the selection of products and laying techniques to be used based on the hygrothermal and mechanical stresses to which the covering will be subjected, it is necessary to consult and adhere to the current UNI 11493-1 standard Ceramic tiling for floors and walls - Part 1: Instructions for design, installation, and maintenance.

Do not use on metal surfaces, wood, plastic, or surfaces subject to heavy movement. Do not use in thicknesses greater than 10 mm; if necessary, level the surfaces beforehand with a product from the **Industria Calce Casertana Srl** line and wait for it to mature before starting the installation. Protect the completed work from rain, washing, or freezing and for at least 5 days from direct sunlight. Gypsum or scagliola-based surfaces must be pre-treated with the appropriate **ICC GRIP** primer. Do not apply on frozen substrates or at ambient temperatures below +5°C. It is recommended not to add foreign products. Do not add water or product to the mixture during setting. Do not use on panels coated with protective films. Only the latest updated version of this technical data sheet, available on the website www.calcecasertana.it, is considered valid.

PRODUCT FOR EXCLUSIVE PROFESSIONAL USE

All data and information contained in this technical data sheet, although resulting from laboratory tests carried out and our direct application experiences, due to the infinite variables related to site conditions, are to be considered purely indicative in any case. Therefore, before applying the product, the user is required to determine if it is suitable for the intended use, in the specific hygrothermal and application conditions expected at the time of use, and in any case, assumes full responsibility. We do not accept liability for damage to people or property resulting from improper use of the product.