



ICC Premiscelati

DIE KOLL C1

PROFESSIONAL CEMENT ADHESIVE FOR
THE INSTALLATION OF CERAMIC TILES.



Description:

DIE KOLL C1 is a cement adhesive that complies with the current EN 12004 standard.

It is a white or grey powder adhesive, made from Portland cement, selected recycled sands, and special polymer additives that enhance its workability and adhesion. By mixing **DIE KOLL C1** with water only, you obtain a mortar that is easy to work with and has high adhesiveness.

Thanks to its special formulation, it can counteract the reduction in workability and setting time caused by the porosity of the substrates and tile absorption, ensuring an open time of at least 20 minutes and excellent workability.

DIE KOLL C1 hardens without significant shrinkage and achieves considerable mechanical strength, adhering perfectly to all commonly used construction materials.

Application fields:

Interior bonding of absorbent ceramic tiles and mosaics (single-fired, double-fired, clinker, terracotta, etc.), as long as they are not large format, on floors and walls. Suitable for installation on traditional plaster or cement mortar walls, on cement screeds, ordinary or reinforced floating screeds, as long as they are sufficiently seasoned and dry. Suitable for installation on gypsum supports and anhydrite screeds, after treatment with **ICC GRIP** primer. Do not use **DIE KOLL C1** on wood, metal, rubber, PVC, linoleum, plasterboard panels, precast concrete, or non-absorbent coverings.

Preparation of substrates:

The substrates must comply with the UNI 11493-1 standard, particularly they must be seasoned (1 week for every centimeter of thickness and at least 28 days, unless specific rapid-setting binders are used), compact and mechanically resistant, free from friable parts, rising damp, sufficiently flat, free from oils, greases, waxes, dust, paints, dirt or anything else that may prevent adhesion to the substrate.

Cementitious substrates should not experience shrinkage after tile installation. 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 appropriate **ICC GRIP** consolidating primer. Highly absorbent surfaces may reduce the open time of the product; it is recommended to pre-treat them with a coat of **ICC GRIP**. For installation on sun-exposed or predominantly dry surfaces, it is necessary to moisten them by wetting with clean water half an hour before installation; avoid applying the adhesive on water stagnations.

Preparation of mortar:

DIE KOLL C1 is mixed using a low-speed mixer or drill with a whisk, with approximately 6 - 6.5 liters of clean water per 25 kg bag of product, until a creamy, homogeneous, and lump-free mixture is obtained. Let the mixture mature for about 5-10 minutes. Briefly remix the mortar and begin operations. The obtained mortar can be used for approximately 4 hours. The product is not suitable for manual mixing or mixing with a concrete mixer.

Application:

DIE KOLL C1 is applied to the substrate using a notched trowel of variable size depending on the format, dimensions, and characteristics of the back of the material to be laid. Spread a first layer of adhesive on the substrate with the smooth side of the trowel, then work it with the notched side to achieve the necessary thickness for tile installation. For ceramic coverings, a trowel size 5/6 is recommended, while for floors and irregular surfaces or tiles with a highly profiled back, a trowel size 8/10 is recommended. Cover the surface with adhesive in a way that allows for tile installation within the indicated open time. Under standard environmental conditions, the open time of **DIE KOLL C1** is more than 20 minutes. Unfavorable conditions (direct sunlight, dry wind, high temperatures, as well as very absorbent substrates) can drastically reduce the open time, so it is important to frequently check that the adhesive has not formed a non-adhesive surface film. If this occurs, reapply the product with the notched trowel.

It is not necessary to wet the tiles, but in the case of tiles with a dusty back, wash them by immersing them in clean water and removing excess water before installation. Press the tiles to ensure uniform and complete contact with the adhesive.

Any tile adjustments can be made within approximately 30 minutes* after installation. The grouting between tiles can be done after 4-8 hours* on walls and after 24 hours* on floors using sealants compliant with **EN 13888**.

The floors can be walked on after approximately 24 hours*, and full use can occur after around 14 days*.

Consumption:

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

TECHNICAL DATA

Consistency	Grey or white powder consistency
Maximum particle size	0,6 mm
Bulk density (fresh mortar)	1,6 gr/cm ³ app.
Mixing water for each 25 kg bag	6 - 6,5 lt
Allowed application temperatures	from +5°C to +35 °C
Working time	app. 6 hours*
Grouting on walls	after approximately 4-8 hours*
Grouting on floors	after approximately 24-36 hours*
Workability	after 24 hours*
Put into operation	after 14 days*

FINAL PERFORMANCE

Initial adhesion (after 28 days)	≥ 0,5 N/mm ² (EN 1348)
Adhesion after immersion in water	≥ 0,5 N/mm ² (EN 1348)
Open time	≥ 20 mins * (EN 1346)
Alkali resistance	excellent
Oil resistance	excellent (poor resistance to vegetal oils)
Solvent resistance	excellent

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

Cleaning of equipment:

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 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 in dust, ventilate the area during mixing, and adequately protect yourself with gloves, protective clothing, and goggles. Before use, carefully read the instructions on the packaging and consult the Safety Data Sheet.

Packaging:

DIE KOLL C1 è is supplied in 25 kg bags, stacked 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 is less than 2 ppm. The properly stored product must be used within 6 months from the packaging date stamped on the bag.

Capitolato Specification:

The installation of absorbent ceramic tiles (single-fired, double-fired, white paste, etc.) will be carried out using a cement adhesive certified according to the UNI EN 12004 standard belonging to class C1, type **DIE KOLL C1** by **Industria Calce Casertana Srl**. Commissioning 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 coating will be subjected, it is necessary to consult and adhere to the current UNI 11493-1 standard Ceramic floor and wall tiles - Part 1: Instructions for design, installation, and maintenance.

Do not use outdoors or on metal, wood, plastic surfaces, or surfaces subject to heavy movement. Do not use for non-absorbent tiles, large format tiles, or flooring subject to heavy traffic. For the installation of porcelain stoneware and for outdoor installations, use **DIE KOLL C2TE ECO**. For installation on heated screeds, for large format tiles, and for installations subject to heavy mechanical or hygrothermal stresses, use **DIE KOLL FLEX C2TE S1**, or use **DIE KOLL C1TE** mixed with synthetic latex **DIE LATEX** instead of water. If it is necessary to level the surfaces, use a product from the **Industria Calce Casertana Srl** line and wait for it to mature before starting the installation.

Protect the completed work for at least 48 hours from rain, washing, or freezing and for at least 5 days from direct sunlight. Gypsum or plaster-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 covered with protective films.

PRODUCT FOR EXCLUSIVE PROFESSIONAL USE

All data and indications reported on this technical 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, he assumes all responsibility for it. We are not responsible for damage to people or property resulting from improper use of the product.