



ICC Premiscelati

DIE KOLL FLEX C2TE S2

HIGHLY DEFORMABLE CEMENT ADHESIVE WITH HIGH MECHANICAL PERFORMANCE, LONG OPEN TIME, AND IMPROVED WORKABILITY FOR INSTALLING LARGE FORMAT CERAMIC TILES OR TILES SUBJECT TO HIGH MECHANICAL OR HYDROTHERMAL STRESSES - IDEAL FOR THIN PORCELAIN STONEWARE



Description:

DIE KOLL FLEX C2TE S2 is a special cement adhesive with exceptional deformability, capable of withstanding thermal variations or high mechanical stresses, and with exceptional adhesion characteristics to all types of ceramic tiles, whether absorbent or non-absorbent, and to the reinforcement meshes sometimes present on the back of ceramic slabs.

DIE KOLL FLEX C2TE S2 has been specifically developed for the installation of large format ceramic tiles, including thin porcelain stoneware, and allows for the installation of ceramic tiles of any type, on walls, floors or ceilings, indoors or outdoors. **DIE KOLL FLEX C2TE S2** is not affected by freezing or strong mechanical stresses.

KOLL FLEX C2TE S2 is a white or gray powder adhesive, based on Portland cement **CEM I 52.5 R**, sifted and selected quartz, and special polymer additives that enhance its workability and adhesion and make it highly deformable when mechanically stressed.

DIE KOLL FLEX C2TE S2 is an improved cement adhesive (**C2**) highly deformable (**S2**), with extended open time (**E**) and zero vertical slip (**T**) according to EN 12004 standard.

Application fields:

Installation of ceramic tiles of any kind (single-fired, double-fired, clinker, porcelain stoneware, ceramic mosaics, glass mosaics, etc.) and any format, on all types of supports normally used in construction: plaster and cement screeds (or mortar mixes), poured concrete, precast concrete panels, tile overlay on existing installations, etc. Installation of reconstituted stone and composite marble or quartz in resin, as long as they are dimensionally stable and not subject to efflorescence or staining. Installation of ceramics on waterproofed substrates with products from the **ELASTOFLEX** range.

Installation of thin porcelain stoneware on external thermal insulation systems (consult our technical office). Installation on marine plywood and wooden agglomerates or old wooden floors, as long as they are stable. **DIE KOLL FLEX C2TE S2** is suitable for particularly demanding applications such as the installation of large-sized thin porcelain stoneware, facade installation, construction of tubs and pools, heated floors, and industrial flooring.

DIE KOLL FLEX C2TE S2 also perfectly adheres to insulating panels made of expanded or extruded polystyrene and mineral fiber panels (rock wool) or equivalents, on walls and ceilings. For special installations, please consult our technical office.

Preparation of substrates:

Ensure that the substrates are mature (1 week per centimeter of thickness and at least 28 days; follow the manufacturer's instructions for fast hydration substrates), solid and consistent, sufficiently flat, free from oils, grease, dust, loose parts, paint, and dirt. Any cracks or fissures should be properly treated. Any depressions or differences in flatness greater than 1 cm should be corrected using a leveling product from the **Industria Calce Casertana Srl** catalog. Slightly dusty surfaces can only be covered after treatment with the **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** primer. For installation on sun-exposed surfaces, it is recommended to cool the substrate by wetting it with clean water half an hour before installation; avoid installation on standing water.

Preparation of mortar:

DIE KOLL FLEX C2TE S2 is mixed using a low-speed mixer or drill with a whisk attachment. Mix with clean water in the quantity indicated on the packaging until a creamy, homogeneous mixture without lumps is obtained. Let the mixture mature for about 10 minutes. Briefly remix the mortar and begin the installation operations. The obtained mortar can be used for approximately 5 hours. Not suitable for manual mixing or with a concrete mixer.

Application:

It is not necessary to wet the tiles; only if they are dusty, immerse them in water to clean them and then wait for them to dry. Apply **DIE KOLL FLEX C2TE S2** to the substrate using a notched trowel of variable size depending on the format and characteristics of the back of the material to be installed. Spread a first layer of adhesive on the substrate using the smooth side of the trowel and then work it with the notched side of the trowel. Cover the surface with adhesive to allow for the installation of tiles within the indicated open time, frequently checking that the adhesive has not formed a non-adhesive film on the surface; pay attention because the open time may vary depending on factors such as exposure to sunlight, air currents, temperature, and relative humidity of the environment. Press the tiles to ensure uniform and complete contact with the adhesive; in the case of large formats, vibration of the tiles with a special machine is necessary. In the case of installation of large formats or installations in exteriors, especially if vertical, or flooring subject to heavy traffic, in accordance with **UNI 11493-1** standard, it is essential to use the double spreading technique to achieve complete "wetting" of the back of the tile. In the case of out-of-plumb plaster or non-flat substrates or in the presence of tiles with highly shaped backs, adhesive thicknesses of up to 10 mm can be achieved.

The possible grouting of the tiles can be done within approximately 45 minutes* after installation. The gaps between the tiles can be filled after 6-8 hours* on walls and after 24-36 hours* on floors with sealants that comply with the **EN 13888** standard.

The floors can be walked on after approximately 24 hours*, and they can be put into operation after 14 days*.

Consumption:

The adhesive consumption varies depending on the flatness of the substrates and the shape of the tiles to be installed: with a 4 or 6 mm trowel, the consumption is approximately 2.5 - 3.5 kg/m²; with an 8 or 10 mm trowel, the consumption is approximately 3.5 - 6 kg/m². Consider approximately 1.3 kg/m² for every mm of adhesive applied.

TECHNICAL DATA

Consistency	Grey or white powder
Maximum grain size	< 0,6 mm
Bulk density (fresh mortar)	1,6 gr/cm ³ approx.
Mixing water per 25 kg bag	white: 7 ÷ 7,5lt grey: 6,8 ÷ 7,2 litri
Allowed application temperatures	from +5°C to +35 °C
Working time	approx. 6 hours*
Grouting on walls	after approx. 6-8 hours*
Grouting on floors	after approx. 24÷36 hours*
Pedestrian traffic	after 24 hours*
Put into operation	after 14 days*

FINAL PERFORMANCE

Initial adhesion (after 28 days)	≥ 1 N/mm ² (EN 1348)
Adhesion after thermal aging	≥ 1 N/mm ² (EN 1348)
Adhesion after immersion in water	≥ 1 N/mm ² (EN 1348)
Adhesion after 25 freeze/thaw cycles	≥ 1 N/mm ² (EN 1348)
Open time	≥ 30 minutes* (EN 1346)
Deformability	≥ 5 mm (S2 according to EN 12004)
Aging resistance	excellent
Moisture resistance	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 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 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 FLEX C2TE S2 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.

Warnings:

Always follow the instructions dictated by current regulations. For the choice 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 standard UNI 11493-1 Ceramic tiling for floors and walls - Part 1: Instructions for design, installation, and maintenance. Do not use on metal surfaces, rubber, PVC, linoleum, 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 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 to 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.