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Cementitions adhesive with extended open time and slip resistance for laying ceramic and porcelain tiles

IK 20

CLASSIFICATION IN COMPLIANCE WITH EN 12004

IK 20 is a normal (1), slip resistant (T), extended open time (E), cementations (C) adhesive of class C1TE.

FIELD OF APPLICATION

IK 20 is used for laying ceramic and porcelain tiles, tiles of various dimensions on various surfaces such as: concrete, cement and plaster-based floors. It is suitable for indoor and outdoor use in residential environments.

TECHNICAL CHARACTERISTICS

IK 20 is a grey or white powder composed of cement, fine-grade, synthetic resins and special admixtures. Mixed with water, IK 20 becomes an easily trowelable mortar with good bonding strength, low slump and high grab so that it can be applied vertically without sagging, even holding heavy tiles. IK 20 hardens without noticeable shrinkage to become extremely resistant, adhering perfectly to all the conventional materials used in construction.
N.B.: Mixing IK 20 with LATEX in place of water improves the characteristics to meet the requirements of class C2ES2 (improved highly deformable cementations adhesive with extended open time) according to EN 12004.

RECOMMENDATIONS

Use IK 20 mixed with LATEX in the following cases:
- On foamed concrete walls;
- On pre-cast or cast-concrete structures;
- Over under floor heating installations;
- With large-size tiles;
- For the installation of glass mosaics;
- For the installation of stone materials as long as they are stable and moisture proof.

Do not use IK 20 in the following cases:
- On wooden substrates;
- On gypsum board walls;
- On metal, rubber, PVC and linoleum surfaces;
- For laying tiles which require a layer of adhesive more than 5 mm thick;
- Where the surface must be set to light foot traffic rapidly;
- For the installation of non-absorbent tiles (porcelain tiles, single-fired tiles, clinker tiles, etc.) on other non-absorbent wall and floor substrates.

APPLICATION PROCEDURE

Preparing the substrate
The substrates must be cured, mechanically strong, free from loose particles, grease, oils, paint, wax and sufficiently dry. Cement substrates must not be subject to shrinkage after the installation of the tiles. During spring and summer, renders must be cured for at least one week for every centimeter of thickness and cement screeds must be cured for at least 28 days, unless they have been made with special binders for screeds. Gypsum substrates and anhydrite screeds must be perfectly dry (max. residual moisture 0.5%), sufficiently hard and free of dust. They must be treated with, IK Primer, while areas subject to high humidity must be treated with IK Primer.

Preparing the mix
IK 20 must be mixed with clean water to obtain a homogenous paste free of lumps; after 5-10 minutes resting, it must be re-mixed. The paste is then ready for use. The quantity of water to be used is ca. 24-26 parts per 100 parts (by weight) of IK 20 (equal to ca. 6 - 6.5 liters of water for 25 kg of powder). The mix, produced in this way, is workable for at least 4 hours.

Applying the mix
IK 20 is applied with a notched trowel onto the substrate. Choose a trowel that will give coverage to the back of the tiles of at least 65-70% for walls or for indoor light foot traffic. For heavy traffic the coverage must be 100%. To obtain good adhesion to the substrate the following system is recommended: first apply a thin coat of IK 20 using the smooth side of the trowel and immediately after apply the desired thickness of IK 20 using the toothed side of the trowel.

Installing the tiles
It is not necessary to wet the tiles before installation; if, however, the backs are very dusty, they should be wiped in clean water. The tiles are installed under a firm pressure to ensure good contact with the adhesive. IK 20 open time in normal temperature and humidity is 20-30 minutes; unfavorable weather conditions (strong sun, drying wind, high temperature), or a highly absorbent substrate may shorten this open time, sometimes quite drastically, to just a few minutes. For this reason, there must be constant checks to see whether the adhesive has formed a surface skin or is still fresh to the touch. Should a surface skin have formed, the adhesive should be re-troweling. It is inadvisable to wet the adhesive when it has formed a skin because, instead of dissolving the skin, a non-adhesive film will be formed. Adjustment of the tiles, if necessary, should be carried out within 60 minutes following installation, after which time, adjustment will become problematic. Tiling installed with IK 20 must not be subject to washout or rain for at least 24 hours and must be protected from frost and direct sun for at least 5-7 days after application.

GROUTING AND SEALING

Wall joints between ceramic tiles can be grouted after 4-8 hours and floor joints can be grouted after 24 hours

SET TO LIGHT FOOT TRAFFIC

Floors are set to light foot traffic after approximately 24 hours.
Floors are ready for use after approx. 14 days

PACKAGING

IK 20 is supplied in white and grey in:
– 20 kg paper bags

STORAGE

IK 20 can be stored for 12 months in a normal environment and original packaging. The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

SAFETY INSTRUCTION FOR PREPARATION AND INSTALLATION

IK 20 contains cement that when in contact with sweat or other body a fluid causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. During use, wear protective gloves and goggles and take the usual precautions for handling chemicals. In case of contact with eyes or skin wash immediately with plenty of water and seek medical attention

TECHNICAL DATA

Product identity

Consistency:	powder
Color:	white or grey
Bulk density (kg/m³):	1300
Dry solids content (%):	100
EMICODE:	EC1 R Plus - very low emissions

Application data (at +23°C and 50% R.H.)

Mix ratio:	100 parts IK 20 with 22-24 parts by weight of water
Consistency of mix:	very pasty
Density of mix (kg/m³):	1450
pH of mix:	13
Pot life:	over 4 hours
Application temperature:	from +5°C to +40°C
Open time (according to EN 1346):	> 30 minutes
Slip:	0.3mm
Adjustability time:	approx. 60 minutes

Final performances

Adhesion strength according to EN 1348 (N/mm²)

– Initial adhesion strength (after 28 days):	0.92
– Adhesion strength after heat:	0.81
– Adhesion strength after water immersion:	0.77
– Adhesion strength after freeze-thaw cycles:	0.63
Temperature resistance after final cure:	from -20°C to +90°C