



ITAL KOL

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VELO WEST AFRICA

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Special high performance, deformable, non-slip adhesive with extended open time, for bonding marble and large format porcelain tiles

IK 40

CLASSIFICATION IN COMPLIANCE WITH EN 12004

IK 40 is C2TE class cementations (C), improved (2), non-slip (T), extended open time (E) adhesive.

FIELD OF APPLICATION

IK 40 is used for bonding all types and sizes of ceramic tiles up to 15 mm thick (marble, double-fired, single-fired, porcelain tiles, terracotta, etc.) on irregular internal and external substrates and render without skimming the surface prior to bonding. It is used for bonding stone on internal and external surfaces stable stone not sensitive to humidity.

TECHNICAL CHARACTERISTICS

IK 40 is a grey or white powder composed of cement, fine-grade, synthetic resins and special admixtures. Mixed with water, IK 40 becomes an easily trowel-able mortar with good bonding strength, low slump and high grab so that it can be applied vertically without sagging, even holding heavy tiles. IK 40 hardens without noticeable shrinkage to become extremely resistant, adhering perfectly to all the conventional materials used in construction.

RECOMMENDATIONS

Use IK 40 in the following cases:

- Bonding ceramic tiles (double-fired, single-fired, porcelain, klinker, etc.), marble and stone on conventional substrates, such as:
 - Cementitious screeds and heated floors;
 - Cementitious render and lime/cement mortar;
 - Plasterboard if on a solid support system.
- Overlaying ceramic and stone on existing floors (ceramic, marble, etc.).
- Bonding floors subjected to intense traffic.
- Bonding ceramic in areas with poor ventilation close to homes where the amount of dust given off must be reduced to a minimum.
- Bonding wall and floor tiles on surfaces waterproofed
- Bonding tiles and strips with profiled or hollow backs (porcelain tiles, single-fired and terracotta) on internal and external surfaces.

Do not use IK 40 in the following cases:

- On wood or wooden conglomerates;
- On metal, rubber, PVC and linoleum surfaces;
- For slabs of marble and natural stone which are subject to efflorescence or staining;
- With natural stone or composite slabs subject to movements caused by damp;
- On precast concrete or concrete with high levels of movements;
- When floors need to be put back into service quickly.

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.

Preparing the mix

IK 40 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. 29-31 parts per 100 parts (by weight) of IK 40 (equal to ca. 7.25 - 7.75 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 40 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 40 using the smooth side of the trowel and immediately after apply the desired thickness of IK 40 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 40 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 40 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 40 is supplied in white and grey in:
– 25 kg paper bags

STORAGE

IK 40 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 40 contains cement that when in contact with sweat or other body 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/m ³):	1250
Dry solids content (%):	100

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

Mix ratio:	100 parts IK 40 with 29-31 parts by weight of water
Consistency of mix:	very pasty
Density of mix (kg/m ³):	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:	0.1mm
Deformability(according 12002):	3.9mm
Adjustability time:	approx. 60 minutes

Final performances

Adhesion strength according to EN 1348 (N/mm ²)	
– Initial adhesion strength (after 28 days):	2.72
– Adhesion strength after heat:	2.51
– Adhesion strength after water immersion:	2.32
– Adhesion strength after freeze-thaw cycles:	1.89
Temperature resistance after final cure:	from -30°C to +90°C