

ISO SUPER FLEX 1054

Product Data Sheet (TDS)

DESCRIPTION

ISO SUPER FLEX 1054 is a one component, high performance, flexible, cementitious tiles adhesive consisting of selected fine aggregates, a high content of modified polymers, and special admixtures. Specially formulated to be capable of fixing all types of heavy or large ceramic tiles, porcelain tiles, mosaics, and natural stone on all common construction substrates internally or externally. ISO SUPER FLEX 1054 is particularly suitable for fixing tiles on horizontal and vertical surfaces for external applications where floors and walls are continuously exposed to temperature variations.

USES

- Interior and exterior bonding application for large format or heavy ceramic tiles, porcelain tiles, mosaics, and natural stone over conventional substrates such as concrete and cementitious screed, mortar, plaster substrates gypsum board.
- Ceramic and stone material tiles on existing flooring.
- Installation of floors on underfloor heating systems.
- Installation of floors subjected to heavy traffic or severe environmental conditions.
- Installation of floor and wall coverings on substrates waterproofed with ISO FLEX 1060 and ISO FLEX ELASTIC 1062.
- Suitable for submerged conditions such as swimming pools, fountains, and water tanks.
- Spot bonding of insulating material such as expanded polystyrene, rock and glass wool, soundproofing panels, etc.

ADVANTAGES

- Highly thixotropic, can be applied on a vertical surface without sagging or letting even heavy and large tiles slip.
- High flexibility characteristic to accommodate the different deformation of the covering from the substrate.
- High bond strength to all materials normally used in building.



- Extended open time for easier application.
- Easy to apply with good workability.
- Ready-mixed, just requires an addition of water.

STANDARD

ISO SUPER FLEX 1054 is an improved (2) slip resistant (T) cementitious adhesive (C) with extended open time (E) deformable (S1) classified as C2TES1 according to ISO 13007 and EN 12004 standards.

PRODUCT & TECHNICAL DATA

Consistency	Powder
Colour	White, Gray
Density of the mix	1.8 g/cm ³
Application Temperature Range	(+5 °C) – (+35 °C)
Service Temperature Range (after final cure)	(-40 °C) – (+80 °C)
Slip resistance (EN 12004-2)	≤ 0.5 mm
Deformability (EN 12002)	≥ 2.5 mm S1 Classification
Tensile Adhesion Strength (EN 1348)	initial ≥ 1 N/mm ² after heat exposure ≥ 1 N/mm ² after immersion in water ≥ 1 N/mm ² after freeze/thaw cycles ≥ 1 N/mm ²
Open time (EN 12004-2)	≥ 30 minutes (tensile adhesion strength ≥ 0,5 N/mm ²)
Pop Life	~ 5 hours
Adjustability time	~ 20 minutes
Layer thickness	10 mm max
Mixing ratio	(26 – 28 %) of water
VOC (ASTM D2369)	< 10 g/ltr

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Grouting	After: 8 Hours on wall / 24 Hours on floor <small>Values determined based on laboratory conditions: 23 °C ± 2 °C, R.H. 50 % ± 5 %. Higher temperatures will reduce the indicated waiting time, and vice versa.</small>
Ready for use	14 days

COVERAGE

Consumption is always dependent on the substrate surface profile, roughness, size of the tiles, the joints between them, and application technique. As a guide: Approx. 1.25 kg/m² per mm of thickness.

It is recommended to carry-out a test on site to calculate the exact consumption for the specific substrate conditions and proposed application.

APPLICATION PROCEDURE

Surface preparation

All substrates must be structurally sound, and provide a fixed and stable background able to support the weight of applied tiling.

Any surface defects and variations in level can be repaired using suitable repair mortars from ISO REPAIR range.

All surfaces must be clean, dry, and free from dust, oil, grease, paints, loose and friable particles, or contaminants such as dust, dirt, oil, or efflorescence.

Smooth surfaces must be reprofiled and roughened lightly to improve adhesion.

For applications in hot conditions, thoroughly pre-dampen the substrate and cool it down with water immediately before product application. Avoid any standing water on the substrate, the surface must be saturated surface dry (SSD).

Concrete and cement based substrates must be cured at least for 2 – 4 weeks prior to tile adhesive application

To check that surface preparation and adhesion are sufficient, conduct a small test before the final application.

Mixing

Mix with a mechanically powered mixer or drill fitted with a spiral paddle to ensure proper mixing. Pour the minimum recommended quantity of clean water (26 – 28%) into a clean container. Gradually add powder to the water while mixing continuously at low speed (< 500 rpm). Mixing time should be continued for 3 - 4 minutes until a uniform consistency, smooth, and free of lumps mixture is obtained. Add additional water, if necessary, to the maximum specified amount. Let mixture stand for about 5 minutes, then remix for ~ 30 seconds without adding any more water. Avoid over-mixing to minimize air entrainment.

Application

Apply a thin layer of ISO SUPER FLEX 1054 onto the substrate using a flat edge of the trowel on the substrate. Immediately after, build up the thickness required according to the type and size of tile, using a suitable notched trowel. Double spreading (buttering) technique is always recommended. Exert adequate pressure to ensure 100 % complete and uniform contact with the adhesive to achieve optimum adhesion. The tile joints may be filled with ISO GROUT a minimum of 24 hours after the fixing of the tiles. The open time of ISO SUPER FLEX 1054 in normal conditions is 30 minutes; while in hot conditions (strong sunlight, drying wind, high temperature as well as a highly absorbent substrate), will reduce this time to a few minutes. Therefore, constantly check that the adhesive has not formed a superficial skin and is still fresh and if that happens, the adhesive must be reworked with the notched trowel. Don't wet the adhesive after it has formed skin, because the water will reduce adhesion in this case.

Recommendations

- Do not apply at a temperature below 5°C.
- Protect freshly applied material from running water and rain for at least 24 hours and must be protected from frost and strong sunlight for at least 3 days after installation.
- Do not apply on metal surfaces, wood, rubber, PVC, linoleum surfaces, or non-absorbent substrates.
- Gypsum plaster and anhydrite screed substrates must have a moisture content of doesn't exceed 0.5 %.
- Apply sufficient adhesive to ensure adequate 'wetting' of the backs of the tiles. Coverage on the back of the tiles must be 100%.
- Do not apply the product in cases that need to be immediately trafficked.

CLEANING

All tools should be cleaned immediately after use with fresh clean water. Hardened materials should be cleaned mechanically.

PACKING

ISO SUPER FLEX 1054 is supplied in paper bags:

- 25 kg.
- 20 kg.

SHELF LIFE

Shelf life is up to 12 months from production date when stored as per recommendations.

STORAGE

Product must be stored in original unopened packaging, under cover, out of direct sunlight and protect from extreme temperatures. In tropical climates the product must be stored in air-conditioned environment.

HEALTH AND SAFETY

As with all construction chemical products, caution should always be exercised. Wear gloves, coveralls and goggles during handling. ISO SUPER FLEX 1054 may irritate the skin or eyes due its containing cement. In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary. Treat any splashes to the skin with fresh water. If the product is swallowed accidentally, do not induce vomiting, but call for medical assistance immediately.

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