

THRAKON GEL⁺

ENHANCED GEL-TYPE CEMENT-BASED TILE ADHESIVE

Technical Data Sheet Version: C' - 26.01.2024

APPLICATION WITHOUT LIMIT

HIGH FLUIDITY / EASY APPLICATION

CONSTANT LAYER THICKNESS

INCREASED OPEN TIME / HIGH THIXOTROPY

RESISTANCE TO PERMANENT HUMIDITY / MECHANICAL STRESS



PACKAGING

25 kg (paper sacks), 5 kg (plastic sacks)



CONSUMPTION

~ 2.5 - 5.0 kg/m²



SHADES

White



STORAGE

Store in a sealed packaging in places protected from moisture, frost and intense radiation for 12 months.

ADHESION

For both absorbent and non-absorbent tiles, of all size, types, and qualities, without limitations.

TYPES OF SUBSTRATES

For conventional and high requirements substrates.

RECOMMENDED

Indoor and outdoor use. For urban and industrial use, as well as building facades.

DESCRIPTION

THRAKON GEL⁺, a gel-type, cement-based tile adhesive, is suitable for each demanding tile application, even for vibrated surfaces. Its unique composition makes it cope with even the most demanding construction sites. It consists of cement, siliceous sand and THRAKON technology's special gel improver additives. The gel additives react as setting regulator, storing the excess water in them, and releasing it at the appropriate time during mixing. Thus, the extra addition of water does not affect the final result. The combination of extended open time (≥ 40 minutes) and zero vertical slip of adhesive increase the workers' productivity. It provides strong adhesion to all standard and pre-existing substrates and high resistance to weather conditions (rain - heat - frost). According to the European Norms, EN 12004-1: 2017 and EN 12004-2: 2017, it is classified as a C2TE S1 type adhesive for indoor and out-door use.

GEL ADVANTAGES / CHARACTERISTICS

- Entire tile wetting.
- Constant application thickness with no shrinkage under the tile.
- Zero vertical slip and shrinkage.
- It allows a significant increase in the addition of water,

improving fluidity without affecting the quality of workability.

- Controlled setting time due to GEL technology.
- Extension of correction time.
- Present more elasticity concerning conventional C2TE S1 class adhesives.
- High deformation – Distribution of stresses/forces.
- Greater tolerance to temperature variations.
- High thixotropy (sag resistance even to large tile).
- Perfect application (Thin or large layers).
- Suitable for underfloor heating and swimming pools.

APPLICATION FIELDS

It is suitable for the adhesion of both absorbent and non-absorbent tiles, small or large ceramic tiles of all types, glass-tiles, thin tiles, stone tiles, natural or artificial marble tiles, natural or artificial granite tiles, cotto, klinker, gres, porcellanato, porcellanato smaltato, decorative elements and glass mosaic tiles on building facades and on substrates requiring high adhesion strength, elasticity and resistance to climate conditions.

It is recommended for laying tiles on conventional substrates, as well as high requirements substrates that shall be subject to vibration and intense contraction and expansion such as gypsum boards, cementitious mortars, cement-plasters, concrete, YTONG (autoclaved

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aerated concrete), cement boards, bricks.

It is ideal for laying tiles and glass mosaic tiles on swimming pools, W.C., baths, changing rooms, saunas, hammam, fountains, water-proof plasterboard, etc..

It is suitable for use in mosaic, aged marble paving, applied tiles and wood panels.

It is suitable for both indoor and outdoor use on floors, walls, terraces and balconies. It is also recommended for laying large tiles and new tiles on pre-existing surfaces and facades. It is recommended for areas with intense humidity (swimming pools, W.C., baths, changing rooms, saunas, hammam, fountains). Proper for urban, industrial and commercial use, as well as for urban architecture.

APPLICATION

- 1 In a clean container, add 8.50-8.75 liters of clean water and gradually empty the content of a 25kg bag of product **THRAKON GEL⁺**. Mix with an electric stirrer until the mixture becomes homogeneous.
- 2 Let the mixture rest for 5 minutes and stir again for a while. The mixture is ready for use for at least the next 1.5-2 hours. After the manufacture of mixture, no extra water should be added in order to work the mortar more easily. That could lead to reduced strengths and increased shrinkage.
- 3 Spread the adhesive on the surface and then comb the adhesive layer using a special toothed spatula. The thickness of the adhesive should be considered satisfactory for the specific coverage.
- 4 Within 30 minutes since adhesive layering, place the tiles at their location, pressuring firmly to ensure full contact. The tiles' laying on the wall may be performed starting from the upper part with the entire tile without any slippage. Any excess adhesive should be removed from the joints. On outdoor surfaces, we create elastic expansion joints per $\approx 10 \text{ m}^2$, while indoors, they are applied per $\approx 25 \text{ m}^2$. All existing joints on the substrate by the manufacturer must be followed. Connections between floors and walls should be filled with suitable silicone mastic sealants.
- 5 During the laying and next 24 hours, the environment and substrate's temperature must be between 5 and 35°C. When the adhesive is still fresh, it can be cleaned with water. When it hardens, it can be removed only with mechanical means. Access is allowed after 24 hours.

GROUTING

Floor grouting can be carried out after 24 hours and wall grouting after 12 hours. Grouting and walking are allowed after 24 hours. **THRAKON** FMF 150 and FMF 160 LUX grouts (cement-based) or, if necessary, FMF 155 epoxy grouts are used for grouting.

PRECAUTIONS

THRAKON GEL⁺ contains cement that reacts with water to produce an alkaline solution. Therefore, eyes and skin should be protected. In case of contact, wash with plenty of water. In case of eye contact, immediately seek medical advice. Read the information on the label and the Product Technical Sheet before use. Wear the appropriate protective clothes and gloves. The MSDS of the product is available upon request to professionals.

SUBSTRATE PREPARATION

The substrate should be dry (without a trace of moisture), flat, clean from loose and foreign matter such as, e.g. plaster residues, paints, oils, etc.. Be stable, free from shrinkage/deformation tendencies and without vibrations.

The absorbent substrates should be wetted with water, for optimal results, then they should be primed, with GLX 290 or GLX 292 primer before application. In special cases of substrates, such as YTONG (aerated autoclaved concrete), gypsum boards, the use of GLX 292 is considered necessary.

The same treatment in the case of natural stones, should be followed after contacting the technical department.

We always advise that before application on standard substrate make a trial application on the same type of substrate.

In case of waterproofing products, such as liquid bitumen and tar-based sheets or membranes, requires the application of a fixing screed on top.

In case of facade cladding, the substrate should have tensile strength equal to or more than 1 N/mm².

For facade tiling with tile side more than 30 cm, mechanical support should be considered, always according to the designer's technical specification. Additional, for tiling using tiles with a side more than 60 cm, add in the water of the mixture an amount of LATEX 296. **It is necessary to apply the adhesive on the back surface of the tile (back butter).**

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WARNINGS

THRAKON GEL⁺ cement-based gel tile adhesive is suitable for underfloor heating as long as the standard EN 1264-4:2009, is met. In case of gypsum boards and cement boards, they should offer rigidity through their proper support on metal elements. For the installation of large surface tiles (>900 cm²) the double spread is considered necessary (back butter).

THRAKON GEL⁺ cement-based gel tile adhesive should not be used as repair mortar to cover discontinuities (cracks) in the substrate. After use, protect from direct rainfall /snowfall for at least 24 hrs.

In addition, the application on rigid metal or wooden surfaces is carried out only indoors and by use of a suitable primer.

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TYPE ACCORDING TO THE EUROPEAN STANDARD EN 12004-1: 2017 & 12004-2: 2017

TECHNICAL CHARACTERISTICS	UNITS	STANDARD	VALUES / CHARACTERISTICS
Form			Dry powder
Colour			White
Application thickness	(mm)		10.0 – 15.0
Temperature resistance	(°C)		-30.0 έως 90.0
Temperature application	(°C)		5.0 έως 35.0
Maximum grain size	(mm)		0.8
Working time	(h)	EN 1015-9	≥2.0
Correction time	(min)	EN 1015-9	≥30.0
Open time (30min)	(N/mm ²)	EN 12004-2	≥0.5
Initial tensile adhesion strength	(N/mm ²)	EN 12004-2	≥1.0
Tensile adhesion strength after water immersion	(N/mm ²)	EN 12004-2	≥1.0
Tensile adhesion strength after heat ageing	(N/mm ²)	EN 12004-2	≥1.0
Tensile adhesion strength after freeze – thaw cycles	(N/mm ²)	EN 12004-2	≥1.0
Substrate movement	(mm)	EN 12004-2	≤0.5
Walking	(h)		≈24
Light foot traffic 23°C / 5°C	(days)		1 / 3
Heavy traffic 23°C / 5°C	(days)		3 / 7
Swimming pools 23°C	(days)		14
Wall grouting	(h)		≈12
Floor grouting	(h)		≈24
Consumption	(kg/m ²)		2.5 - 4.0

Note: The measurements were taken in laboratory environment under a temperature of 23±2°C, Relative Humidity 50 % and without ventilation. They may vary depending on the conditions prevailing at the worksite, such as temperature, humidity, ventilation and absorbability of the substrate.

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