
X-Fix®

Technical Specifications



Professional adhesive with high bonding strength, zero vertical slippage and a long open time (>30 mins) for the installation of ceramic tiles on floors and walls on cementitious substrates. Thicknesses up to 15 mm.

Product description

Professional tile adhesive for laying tiles on cementitious substrates for both floor and wall applications. Guarantees high bonding strength, zero vertical slip and an extra-creamy thixotropic consistency. With an extended open time and an adjustment time of over 30 minutes, it develops high resistance to slippage and is suitable for thicknesses up to 15 mm. For indoor and outdoor use.

Classified as C1TE – EN 12004

Performance

Thixotropic
Extra creamy
Extended open time > 30 mins
Adjustment time > 30 mins
High slip resistance

Certifications

EN 12004
ISO 13007
EC1 Plus Gev Eimcode
A+ Indoor air emissions
EPD Environmental Product Declaration

X-Fix® and the environment

LCA results for Global Warming Potential – Greenhouse Gases (GWP-GHG)							
Impact category	Unit	A1–A3	C1	C2	C3	C4	D
Climate change GWP-GHG	kg CO ₂ eq	4.33 10 ⁻¹	4.38 10 ⁻³	1.08 × 10 ⁰²	0	4.90 10 ⁻³	-5.52 10 ⁻³

Materials

Ceramic tiles
Terracotta – Klinker
Marble – Granite – Stone materials
Natural stone
Porcelain stoneware

Substrates

Cement-based screeds
Self-levelling compounds
Levelling compounds
Concrete
Plasterboard
Plaster and anhydrite
Plaster

Uses

Interior – exterior
Floors and walls
Residential, public, commercial building

Limitations

Refer to national standards, such as UNI 11493
Ensuring a full bed in outdoor applications
Protect the tiled surface from heavy rain for at least 24 hours
Temperature, ventilation, substrate absorbency and the substrate material may affect the workability and setting times of the adhesive
Do not add water to the mix once it has started to set
Do not use on concrete that has not been adequately cured
Do not use on gypsum- or anhydrite-based substrates without first applying X-Prime®
Do not use on timber or wood-based composites
Do not use on metal, rubber, PVC or linoleum surfaces
Do not use where the surface needs to be ready for foot traffic quickly
Do not use on organic reactive waterproofing membranes (type RM according to EN 14891)
Do not use for applications not listed on this Technical Data Sheet
For further information, please contact Litokol's Technical Customer Service on +39-0522-622811 or via customer care@litokol.com

Product specifications

Appearance	Powder
Colour	White – grey
Responsible Packaging	20 kg recyclable bag
Customs heading	38245090
Storage	12 months in original packaging in a dry place.

Technical Specifications

Compliance	EN 12004 – ISO 13007	C1TE
Initial bond strength after 28 days	$\geq 0.5 \text{ N/mm}^2$	EN 1348
Adhesion after immersion in water	$\geq 0.5 \text{ N/mm}^2$	EN 1348
Adhesion following heat exposure	$\geq 0.5 \text{ N/mm}^2$	EN 1348
Adhesion after freeze-thaw cycles	$\geq 0.5 \text{ N/mm}^2$	EN 1348
Open time	$\geq 0.5 \text{ N/mm}^2$ after 30 minutes	EN 1346
Slip	$\leq 0.5 \text{ mm}$	EN 1308
Moisture resistance	Excellent	
Alkali resistance	Excellent	
Solvent resistance	Excellent	
Acid resistance	Low	
pH of the mixture	13	
Specific gravity	1.6 kg/dm^3	

Application Specifications

Consistency of the mix	Thixotropic cream
Preparation of the grey adhesive mixture	Water = 25–28% ~ 5–5.6 l / 20 kg
Preparation of white adhesive mixture	Water = 28–31% ~ 5.6–6.2 l / 20 kg
Dough proving time	5 minutes
Recording time	30 minutes
Pot life	About 6 hours
Applicable thicknesses	From 1 to 15 mm
Application	Notched trowel suitable for the tile size and substrate
Application temperatures	From +5°C to +35°C
Drying time for grouting	Wall: 6–8 hours – Floor: 24 hours
Ready for foot traffic	24 hours
Commissioning	7 days
Operating temperature	From -30°C to +80°C
Cleaning of equipment	With water when the product is fresh. Mechanically once the product has hardened.
Coverage	3.5 mm trowel: ~ 1.8 kg/m^2
Coverage	6 mm trowel: ~ 2.5 kg/m^2
Coverage	8 mm trowel: ~ 3 kg/m^2
Coverage	10 mm trowel: ~ 3.5 kg/m^2
Coverage	Double coat: ~ 5 kg/m^2
Notes	Data recorded at a temperature of +23 °C, 50% RH and in the absence of ventilation. These may vary depending on specific site conditions.

Preparation of substrates

In accordance with standard UNI 11493-1, substrates must be mechanically sound and free from crumbly parts, grease, oil, paint, wax and rising damp. Cement-based plasters must be allowed to cure for at least one week per

centimetre of thickness.

Cement-based screeds must have a total curing period of at least 28 days or be laid using the innovative X-Floor and X-Floor Pro anti-crack screeds.

Create gradients on balconies or pavements using the new-generation crack-resistant levelling compound HydroLevel® 1-30.

Dusty, porous and absorbent substrates must be treated with X-Prime®, an innovative fixative and consolidant.

Smooth, compact substrates, such as trowelled concrete, old ceramic tiles or terrazzo tiles, must be treated with the latest-generation adhesion promoters X-Activator® or X-Activator® Grip after thorough cleaning with the specific detergent X-Cleaner® Scrub.

In the case of anhydrite screeds, ensure that a suitable vapour barrier is in place to prevent any rising damp.

Check using a carbide hygrometer that the residual moisture content is less than 0.5% and 0.3% for underfloor heating screeds.

The surface must be sanded and primed with X-Prime®.

Any cracks or fissures must be sealed with CrackRepair.

In any case, it is essential to consult the relevant technical data sheets to ensure the correct use of the products indicated.

Preparation of the mix

Pour the correct amount of water, depending on the application, into a clean container and slowly add the product, mixing with a mechanical mixer until a smooth, lump-free mixture is obtained.

Leave the mixture to rest for 5 minutes and stir briefly for a few seconds.

Application

To ensure perfect adhesion of the adhesive to the substrate, apply a thin, even coat of the mixture using the smooth side of the trowel and, immediately afterwards, apply the desired thickness using the notched side. The notching of the trowel must be chosen according to the size of the material to be laid and the substrate.

In accordance with standard UNI 11493-1, use the double-coating technique, applying the adhesive to the back of the tiles as well to ensure complete wetting, for outdoor installations or in areas subject to particularly high stress.

To ensure complete transfer of the adhesive to the back of the tiles, they must be laid onto the still-fresh adhesive whilst applying sufficient pressure.

The open time under standard temperature and humidity conditions is approximately 30 minutes.

Very hot or windy conditions, or highly absorbent substrates, can drastically reduce this to just a few minutes; it is therefore advisable to check frequently that the adhesive has not formed a surface film.

In accordance with the UNI 11493-1 standard, tiles must be laid with joints of a width appropriate to their size.

Take account of any partition or structural joints and provide suitable expansion, partition and perimeter joints.

Special Applications

Marble, Natural Stone and Recomposed Stone

Materials prone to deformation or staining due to water absorption require a hydro-curing gel with accelerated adhesion and fast setting, such as FastGel® or FastGel® S1+ (C2F – EN 12004), or a reactive gel such as PowerGel® Pro, FastGel® Pro or PowerGel® Pro Max (R2 – EN 12004).

Even marbles and natural stones of the same type can have different characteristics.

If in doubt, we recommend consulting Litokol's Technical Customer Service in advance for detailed information or to carry out a laboratory test.

Natural stone slabs with reinforcing layers applied to the back (resins, reinforcing mesh, etc.) or specific treatments (e.g. anti-rising damp, etc.) require a compatibility test with the adhesive, unless otherwise specified by the manufacturer.

Before installation, check for any traces of dust or debris on the back of the slabs.

If this occurs, they must be removed.

Mixing with BoosteGel®

For tiled surfaces subject to high stress, such as high-traffic areas, terraces, balconies and damp environments such as swimming pools, the mixing water may be partially or completely replaced with the H2O BoostGel® additive.

Replacing part of the water with BoostGel® in a 1:1 ratio enables the adhesive to achieve C2TE S1 performance – a high-performance, deformable cementitious adhesive – whilst replacing all the water with BoostGel® enables the adhesive to achieve C2TE S2 performance – a high-performance, highly deformable cementitious adhesive.

These advanced solutions optimise the molecular structure of the adhesive, significantly enhancing its adhesion, resistance to weathering and chemicals, and durability.

Grouting, sealing and maintenance

For grouting, the decorative grouts X-Color® 0-6 or X-Color® 2-12 and the ready-to-use polymer-modified mortar FillGood® EVO can be used.

To create waterproof joints with high colour fastness and superior chemical and mechanical resistance, use the decorative epoxy gels from the Starlike® range.

For the elastic sealing of expansion joints, partition joints and perimeter joints, use sealants from the Pixel 3D range.

For post-construction washing, cleaning, maintenance and surface protection, use the specific Litokol detergents from the X-Cleaner and Starlike® Care ranges.

Safety Information

For the safe use of our products, please refer to the latest version of the Safety Data Sheet, available at www.litokol.com

PRODUCT FOR PROFESSIONAL USE

Legal notices

The information and specifications contained in this Technical Data Sheet are based on our best knowledge.

However, as we are unable to directly influence site conditions or the execution of the works, these are general guidelines which do not in any way bind our Company.

We therefore recommend carrying out a preliminary test to verify the product's suitability for the intended use; in any case, anyone intending to use it is required to determine whether or not it is suitable for the intended use and, in any event, assumes all liability that may arise from its use.

Always refer to the latest updated version of the Technical Data Sheet, available on the website www.litokol.com

Specification item

The installation, both indoors and outdoors, in accordance with UNI standards 11493-1 and 11714-1, of all types of ceramic floor and wall tiles – porcelain stoneware, single-fired, double-fired, clinker and terracotta – dimensionally stable stone materials that are not susceptible to staining, and mosaics – shall be carried out using a professional adhesive, resistant to vertical slippage and with an extended open time of more than 30 minutes, classified as C1 TE in accordance with standard EN 12004, type X-Fix® by Litokol Lab SpA.

Product details **No. 037**

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