FastGel®

Technical Specifications



Duo-polymeric, water-curing gel with dual pot life. Accelerated adhesion and rapid setting. Dynamic flexibility. Enhanced with quartz microspheres, Fluidotixo® - C5 with low cement content, for the installation of tiles, porcelain stoneware, large slabs of all types and sizes, and natural stone. Prevents the formation of stains on marble and natural stone susceptible to moisture.

Product description

Dual-polymer hydro-curing gel with dual pot life, accelerated adhesion and rapid setting, dynamic flexibility, featuring the exclusive Fluidotixo® Anti-Fatigue compound, enhanced with quartz microspheres, formulated with low cement content (<25%), for the installation of tiles, porcelain stoneware of all types and sizes, and natural stone in both indoor and outdoor applications.

Designed for high application reliability and thanks to state-of-the-art technology, the mixture is extremely creamy, fluid and thixotropic; it maintains its shape and thickness on both floors and walls with 100% wetting power, achieving double vertical slip resistance (T) and an extended open time of over 45 minutes.

FastGel® develops accelerated monolithic adhesion with ultra-high-performance rapid setting thanks to the synergy between the dual-polymer system and the quartz microspheres.

The polymers work in combination to create a flexible yet strong adhesive matrix, capable of adapting to different and non-perfectly flat surfaces of the substrates.

The quartz microspheres, distributed evenly throughout the mixture, act as a reinforcing agent, helping to improve internal cohesion and mechanical strength.

The dual curing mechanism ensures stable, tension-free installation and uniform adhesion of large-format tiles and stone slabs, whilst preventing the formation of stains on marble and natural stone susceptible to moisture.

This advanced interaction enables FastGel® to deliver high performance with rapid curing times of 12 hours, even on challenging substrates or those subject to high stresses, such as overlays on old floors, underfloor heating

systems, street furniture, balconies and terraces, where even extreme temperature fluctuations, humidity and mechanical stresses make adhesion conditions critical.

Classified as C2FTE – EN 12004

Gel formula with a patent application filed

FastGel® is a highly innovative Litokol invention with
International patent application filed in Italy No. 102025000025369
Integration of diverse polymers
Low Portland cement content <25%
Hybrid engineered hydraulic binders
Blend of fast-setting binders
Reinforced with quartz microspheres > 30%
Calcium silicate gel
Latest-generation cellulose under our own licence
High mineral aggregate content

FastGel® embodies Litokol's ongoing scientific progress.
It is designed using innovative raw materials to improve the installation experience, enhance safety and reduce environmental impact.

Supplied by

Fast Control® technology
Bond Strength – Accelerated monolithic with ultra-high-performance rapid setting

Mix classification

Mix Class	Level of smoothness	Lightness index
C1 – Thick / Paste-like	Requires more force to apply	Standard
C2 – Medium Consistency	It does not run and offers good workability	Standard
C3 - Fluidotixo	Slippery and thixotropic	Light
C4 - Fluidotixo Dinamico	Highly flowable and thixotropic	Light
C5 - Fluidotixo Anti-Fatigue	Ultra-smooth and thixotropic	Ultra Light

Gel Performance Fluidotixo Mix

Class 5 – Fluidotixo® Anti-Fatigue Mix
Fluidotixo® Anti-Fatigue Compound - Ultra-smooth, thixotropic and ultra-lightweight: its extremely fluid consistency makes it easy to apply, whilst maintaining its shape and thickness without running. Designed with high-tech materials (quartz microspheres), the compound spreads with minimal effort, making the gel ideal for prolonged application over large areas.
The Fluidotixo® mixture has gel-like rheological properties, characterised by an initially thixotropic consistency which, under mechanical action (trowelling), reduces its viscosity, becoming temporarily more fluid.
This pseudoplastic behaviour allows for precise and highly fluid application, with superior adhesion to the substrate.
The Fluidotixo® Antifatica compound has an extremely low apparent viscosity, which promotes exceptional fluidity under the trowel and 100% wettability.
Designed for professional installers, the same mix delivers exceptional spreadability and reduces fatigue during prolonged installation of floor and

wall coverings. Once applied, its ultra-thixotropic formula ensures that the shape and thickness remain unchanged on floors, with no sagging up to a thickness of 20 mm, even with large slabs and thick tiles. On walls, it ensures precise and controlled application without vertical slippage, even with large slabs, achieving a double slip resistance rating of T (T).
The advanced performance characteristics of FastGel® allow for corrections even several minutes after application, achieving an extended open time of over 45 minutes.
FastGel® is a hydro-reactive gel with a dual pot life: a self-reversible mineral system that allows the applicator to reactivate the mixture simply by mechanical mixing, whilst maintaining adhesive integrity and thixotropic cohesion.

Double pot life
FastGel® is a mineral-based reactive gel with a Dual Pot Life System that retains its chemical energy for over 60 minutes, offering a dual pot life window.
Depending on weather and application conditions, the mixture can be reactivated by simple mechanical stirring, without any loss of cohesion or adhesive strength.
The thixotropic colloidal network of FastGel® reactivates instantly: the mixture becomes fluid and thixotropic again, ready for a second application phase.

Double Slip Resistance T (T)
FastGel® is formulated with an innovative blend of latest-generation modified cellulose. Designed for wall applications, it offers dual slip resistance: maximum stability of the mixture after application with no sagging, and enhanced adhesion under pressure, preventing the tile from slipping.
The role of advanced cellulose compounds in anti-slip performance is fundamental to developing a static grip effect and activating an elastic memory that locks the tile in place immediately after application, allowing for precision adjustments without compromising adhesion.
Consistent performance, even with heavy formats or in critical environmental conditions.

Extended Open Time
FastGel® is a water-curing gel with accelerated adhesion and rapid setting which, thanks to an innovative blend of quartz microspheres and latest-generation modified cellulose under its own licence, utilises extended open-time technology (> 45 mins), allowing more time for laying, correcting and adjusting, even under challenging conditions.

Gel Performance Adhesive Interface

Duo-Polymer Gel
The ultimate expression of innovation in mineral-based adhesives.
An advanced gel system with a dual polymer matrix, capable of combining chemical reactivity on any substrate with flexibility and intelligent rheology: fluid under stress, stable at rest.
Reinforced with quartz microspheres, it creates an active structural interface (ITZ) that ensures flexible, monolithic adhesion under extreme conditions.
Capable of chemically bonding to any surface, flexing, absorbing, distributing and neutralising any mechanical stress.

Hydro-curing Gel – Fast Control® Technology
Developed using the most advanced materials engineering, Fast Control® is an engineered hardening system based on the synergistic interaction

between mineral hydration and hydro-curing cross-linking.
This dual-curing mechanism triggers two complementary reactions:

After the first 60 minutes

1. Accelerated bonding begins (initial curing kinetics), during which the polymer phase is activated and develops high mechanical strength
2. At the same time, the hydraulic reaction begins but remains controlled because it is partially constrained by the polymeric network ('Curing Control' effect).

After 3 hours

1. Rapid setting begins (second stage of hardening), during which cement hydration takes place internally, creating the final mechanical structure.

After 12 hours

1. Both networks (mineral + polymer) interpenetrate to form the IPN (Interpenetrating Polymer Network) hybrid network.
2. The result is a gel with a balanced setting time, specifically designed for stable, tension-free installation and uniform adhesion of large-format tiles and stoneware slabs.

Gel Performance Safety

Security – Level 3

Thanks to Fast Control® technology, an accelerated monolithic bond with ultra-high-performance rapid setting develops during the gel's curing phase, ensuring an ultra-high-performance installation capable of withstanding a wide range of mechanical and thermal stresses.
The presence of an accelerated, monolithic bond with ultra-high-performance rapid setting makes FastGel® particularly suitable for the tension-free installation of large-format tiles and slabs on underfloor heating systems, as an overlay and in outdoor environments.
FastGel® is also designed to prevent the formation of stains on marble and natural stones that are sensitive to moisture.

Chemistry + Smart

Low Portland cement content <25%
Very low emissions of volatile organic compounds (VOCs)

Certifications

EN 12004
ISO 13007
MED 2014/90/EU
EC1 Plus Gev Emicode
A+ Indoor air emissions

Materials

Porcelain stoneware
Ceramic tiles
Large formats, including thin tiles
Laminated stoneware slabs
Mesh-backed porcelain stoneware slabs
Marble – Granite – Stone materials
Natural stone
Ceramic and glass mosaics
Terracotta – Klinker

Resin- or cement-based composites
Insulating and sound-absorbing panels for interiors

Substrates

SafetyGel®
Screeds
Self-levelling compounds
Levelling compounds
Plaster
Plasterboard
Plaster and anhydrite
Existing tiles
Radiant heating systems
Waterproofing products
Decoupling membranes
Aerated concrete
Fibre-cement sheets
Concrete

Uses

Adhesive – levelling compound
Floors – walls
Interior – exterior
Overlay
Radiant heating systems
Indoor wet areas – bathrooms and showers
Pools, swimming pools and fountains
Terraces and balconies
SPA and Hammam
Facades
Industrial flooring
Residential, public, commercial and street furniture
Areas subject to heavy footfall and high stress
Approved for marine use in accordance with the MED Directive 2014/90/EU

Limitations

Refer to national standards, such as UNI 11493
Ensure a full bed outdoors or under high loads
Protect the tiled surface from heavy rain for at least 12 hours
Temperature, ventilation, substrate absorption and installation material may affect the workability and setting times of the gel
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 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 customercare@litokol.com

Product specifications

Appearance	Hydrolysed gel powder
Colour	White – Grey
Responsible Packaging	20 kg recyclable bag
Storage	12 months in original packaging in a dry place
Customs heading	38245090

Technical Specifications

Compliance	EN 12004 – ISO 13007	C2 F TE
Initial bond strength after 28 days	≥ 1.0 N/mm^2	EN 1348
Adhesion after immersion in water	≥ 1.0 N/mm^2	EN 1348
Adhesion following heat exposure	≥ 1.0 N/mm^2	EN 1348
Adhesion after freeze-thaw cycles	≥ 1.0 N/mm^2	EN 1348
Open time	≥ 0.5 N/mm^2 after 30 minutes	EN 1346
Initial tensile adhesion after 6 hours	≥ 0.5 N/mm^2	EN 1348
Slip	≤ 0.5 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

Mix class	Class 5 - Fluidotixo Anti-Fatigue
Preparation of grey gel mixture	Water = 23–26% ~ 4.6–5.2 l / 20 kg
Preparation of White Gel mixture	Water = 24–27% ~ 4.8–5.4 l / 20 kg
Dough proving time	5 mins
Pot life	60 min
Applicable thicknesses	From 1 to 20 mm
Open time	> 45 min
Recording time	> 30 minutes
Application	Notched trowel suitable for the tile size and substrate
Application temperatures	Da +5°C a +35°C
Drying time for grouting	Wall: 3 hours – Floor: 3 hours
Ready for foot traffic	3 hours
Commissioning	12 hours
Operating temperature	From -40°C to +90°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 time of at least 28 days or be laid using the innovative X-Floor and X-Floor Pro crack-resistant 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

To fully appreciate the superior flow properties and thixotropy of the innovative Fluidotixo® Antifatica Gel compound, we recommend mixing the product using the specified mixing ratio.
Pour the correct amount of water into a container and slowly add the product, mixing with a mechanical mixer until a creamy, homogeneous mixture free from lumps is obtained.
Leave the mixture to rest for about 5 minutes, during which time the polymeric gel develops fully: the hydraulic binders, fillers and cellulose hydrate uniformly, the micro-air bubbles incorporated during mixing are eliminated and the polymers begin the activation process.
Stir briefly to achieve the ultra-smooth, thixotropic, ultra-light Fluidotixo® Anti-Fatigue gel consistency, which is easy to apply to both floors and walls.

Application

To ensure the gel adheres perfectly 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.
Depending on weather and application conditions, the mixture can be reactivated by simple mechanical stirring, without any loss of cohesion or adhesive strength.
In accordance with the UNI 11493-1 standard, use the double-coating technique, applying the gel to the back of the tiles as well to ensure complete wetting during installation outdoors, in swimming pools, on façades or in areas subject to particularly high stress.
To ensure complete transfer of the gel to the back of the tiles, they must be laid onto the still-fresh adhesive whilst applying adequate pressure.

The open time under standard temperature and humidity conditions is approximately 45 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 water-curing gel with accelerated adhesion and rapid setting, such as FastGel® or FastGel® S1+ (C2F – EN 12004), or a reactive gel such as PowerGel® Pro, FastGel® Pro or PowerGel® Pro Max (R2T – 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.

Radiant Heating Systems

At least 4 days after laying the X-Floor® or X-Floor® Pro anti-crack screed, you can start up the heating system with a supply water temperature ranging from +20°C to +25°C, maintaining it at a constant level for at least 3 days.
Next, set the maximum design temperature and maintain it for a further 4 days.
At the end of this cycle, allow the screed to return to room temperature and lay the covering (EN 1264-4).

Swimming pools

In accordance with standard UNI 11493 – 7.13.3, swimming pool tiling must be designed taking into account mechanical, thermo-hygrometric and chemical stresses: continuous contact with chemically treated water (even during the winter season) and frequent sanitisation procedures.
In concrete structures, the correct composition must be ensured (UNI 11104 – EN 206) and the correct curing time observed (minimum 6 months, UNI 11493 - 7.3.1).
It is essential to waterproof the external part of the structure, taking preventive measures to avoid any infiltration that could cause the waterproofing membrane applied inside the tank to detach, such as drainage along the sides of excavations or waterproofing using osmotic mortars.
Grind and level surfaces with HydroLevel®, a quartz-reinforced structural levelling compound with controlled expansion and crack-resistant properties.
Waterproof the pool surfaces using the watertight, crack-resistant SafetyGel® elastic gel membrane with 6-Dimensional Elasticity technology, or the breathable, tripolymer waterproof gels enhanced with quartz microspheres from the HydroPad® range featuring 4-Way Flex technology.
Seal critical areas such as construction joints with HydroStop, and pipes passing through recirculation, filtration, drainage and lighting systems with HydroPixel®.
We recommend carrying out a water-tightness test before laying the

cladding.
Always apply gel to the back of the material as well (double coating) to ensure a full bed of adhesive, guaranteeing full force transfer and the durability of the system.

Facades

When installing on external walls (H > 3 m), as these are tiled surfaces subject to high dilatometric stresses due to thermal and hygrometric variations, and given the safety risk associated with potential detachment, it is recommended to consult Litokol's Technical Customer Service in advance in order to accurately identify the safest installation technique.
In accordance with standard UNI 11493 – 7.13.7, the following general guidelines must be followed: the substrate must ensure a cohesive tensile strength of ≥ 1.0 N/mm^2.
In the case of masonry substrates consisting of bricks/clay blocks, lightweight blocks, etc., direct application is not permitted; instead, application onto plaster in accordance with the above instructions is required.
For cladding with a side length > 30 cm, the designer must assess whether it is necessary to specify suitable mechanical safety fixings.
Separation and expansion joints must be provided as specified in sections 7.11.1.2 and 7.11.1.3.
Always apply adhesive to the back of the material as well (double coating) in order to achieve a full bed of adhesive, ensure full force transfer and guarantee the durability of the system.

Grouting, sealing and maintenance

For grouting, X-Color® 0-6 or X-Color® 2-12 decorative grouts 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.

Warnings

Due to the high content of adhesive polymers, it is recommended to wash tools and remove any product residue from surfaces with water before the Gel sets.
Once the reaction is complete and the gel has hardened, it can only be removed mechanically.

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 set out in this technical data sheet are based on our best experience.
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, terracotta, stone and mosaic – will be carried out using a dual-polymer, water-hardening gel with a double pot life, which offers accelerated adhesion and rapid setting, dynamic flexibility, and is reinforced with quartz microspheres, using a low-cement-content Fluidotixo® - C5 mix, classified as C2FTE in accordance with standard EN 12004, of the FastGel® type from Litokol Lab SpA.

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