EN

General catalogue

all the products for building industry professonals

LITOKOL®

Preview

INFO

Eco-sustainability
Page 4

The Zherorisk® project, the new generation of EVO products to safeguard the health of operators, the quality of the air and safety in transporting goods. Litokol's commitment to safeguarding the environment.

Synopsis for choosing adhesives
Page 22

The best product for all applications governed by the criteria of the UNI 11493 standard in force in Italy.

Laying systems
Page 40

All the experience accumulated by Litokol in over fifty years of working for tile installers, to obtain the best result from the product families.

The products
Page 69

The range of Litokol products, divided by families, with basic technical information.

A guide to using Litokol products
Page 109

The methods of using Litokol products grouped into a practical guide. **For correct use and detailed information, please refer to the technical data sheets available on www.litokol.it**.
Remember also that our technical department is always on hand to advise you.

Index

vision

The skills honed in over fifty years of history have allowed Litokol, in terms of expertise developed and results, to realise its vision which revolves around the philosophy of its founder:

The people who work for Litokol are committed to making a unique contribution to the development of their company: it is not a question of simply promoting growth or economic results, but of conveying values of excellence, respect for others and the ability to find solutions to people's requirements. All of this represents the heart of our company and the vision with which we look to the future.

Litokol's staff is committed to contributing something unique to the development of their company:
this means not just setting ourselves apart, but being different.

mission

Litokol produces innovative, high-performance products for the ceramic and building community, developing its strategies for action on three fronts: new products, new technology and new markets.

The framework of these three different lines of development has led to the creation of adhesives, grouts, decorative products and building solutions which reach our customers all over the world on a daily basis.

Creating innovative products using new technology is one of the operational goals featured in our mission:
in a nutshell, different products must be created.

ZHERORISK®
EVOLUTION TECHNOLOGY

Zherorisk® is a research initiative carried out by Litokol's R&D division, with the participation of the University of Modena and Reggio Emilia, the DICAM (Department of Civil, Chemical, Environmental, and Materials Engineering) of Bologna and external research institutes. The Zherorisk® platform is a technology projected into the future with the aim of developing an innovative generation of eco-sustainable building materials, at "zero risk". The goal is to guarantee the safety of people through three aspects: **safeguarding the health of professional operators**; the **quality of air** in homes, places of work and free time; the **transportation of goods.**

The study of primary materials and ways to combine them leads to the creation of a new family of innovative products, all with eco-sustainable characteristics.

Zherorisk® Evolution Technology

The Zherorisk® project **identifies the diversity** of Litokol products: an **investment in the safety** of tile installers and people

Zero risk for the user

- ✓ Studies show that most VOC emission (Volatile Organic Compounds) occurs during application: the use of products with ultra-low VOC emission increases the safety of professional users;
  the lack of pungent and unpleasant odours makes the workplace much more comfortable.
- ✓ Non corrosive
- ✓ Non toxic
- ✓ Non-hazardous to the environment

Zero risk for homes

✓ Very low VOC emissions: safeguarding the qualityof air in homes and the health of those who live there.

Zero risk in transportation

- ✓ Product not subject to restrictions for road, sea, air and rail transport
- ✓ No ADR restrictions for road transport
- ✓ No IMO containers for transport by sea

Zero risk for the environment

- ✓ Renewable primary materials
- ✓ Recycled materials
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Reduced consumption of basic materials

Indoor pollution and Volatile Organic Compounds (VOC)

One of the main causes of indoor pollution is the emission of Volatile Organic Compounds (VOC).

These are chemical compounds of various types which are volatile, i.e. they evaporate easily into the air at room temperature. They are found in many everyday products, in building materials and furnishings (e.g. furniture, carpet, coverings, insulation), which may be the cause of continuous, long-lasting emissions over time.

Everybody at some stage or other has experienced the strong odours emitted after installing a new piece of furniture or painting the walls. The odours are caused by the volatility of certain substances contained in the wood of furniture or paints. In fact, high VOC concentrations are predominantly found during the period immediately after laying certain materials or the installation of furniture. VOC emissions are at their highest at the beginning of the product's lifecycle and so, one of the most critical moments is when the operator prepares and uses it, especially in closed or poorly ventilated areas. After which, the emission rate tends to drop significantly and relatively quickly (within one week for paints and adhesives, and six months for other chemical compounds). The challenge presented by the Zherorisk® research initiative was to drastically reduce the emission of volatile organic compounds (VOC), the main cause of indoor pollution, without altering the chemical and physical properties of the products.

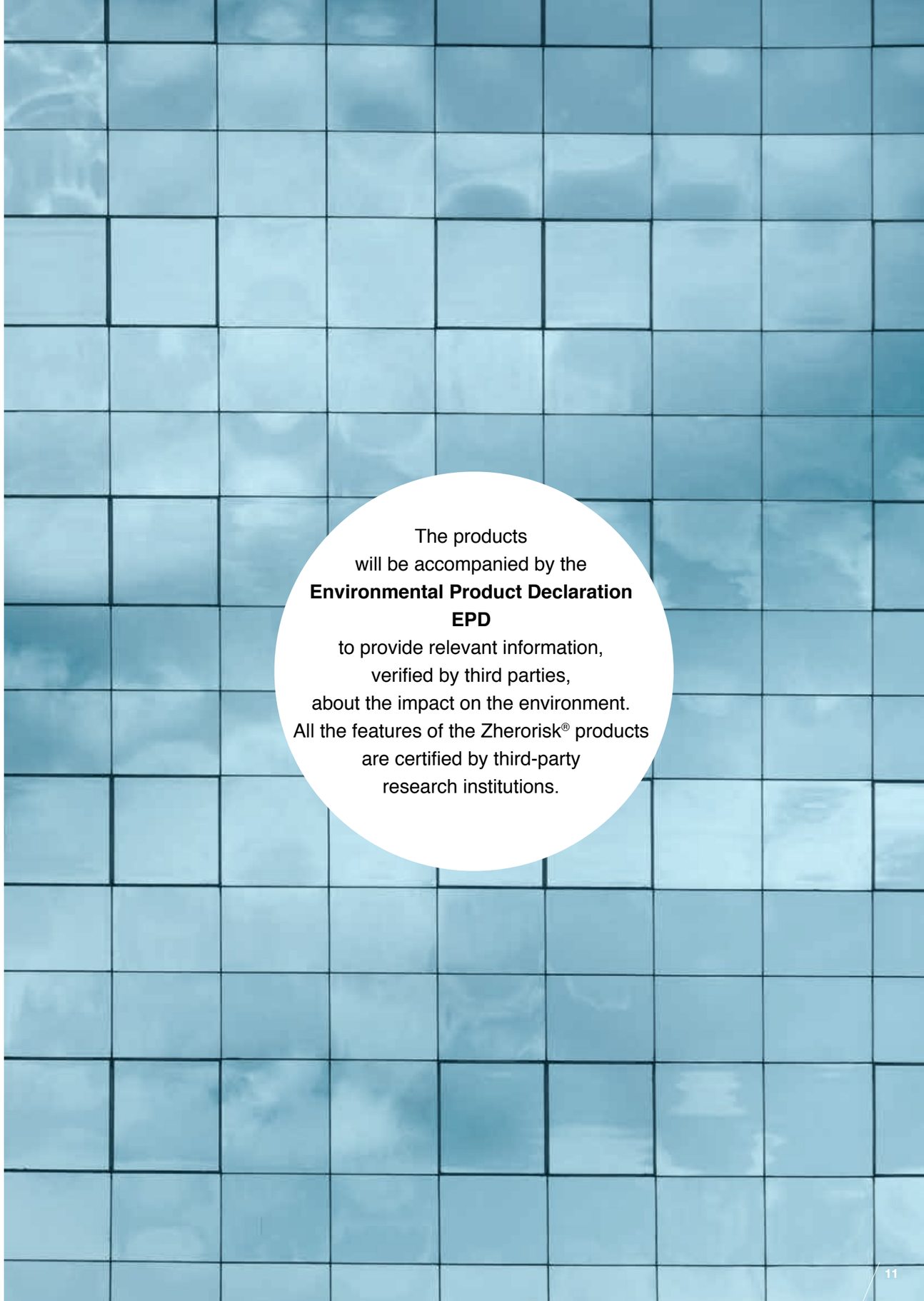
Certifications

EC1 PLUS

Litokol products come with EMICODE EC1 PLUS certification and labelling, for "products with a very low volatile organic compound emission rate" in compliance with the guidelines issued by GEV (association for the control of building material emissions), **with much lower values than the limit values.**

Émission dans l'air intérieur

"Émission dans l'air intérieur" is the mandatory labelling of building products or wall and floor covering products used in buildings, in accordance with the French regulation on the characteristics of volatile pollution emissions (VOC) for the product. The product emission level is indicated by a class ranging from A+ (very low emissions) to C (high emissions), according to the same principle used for electrical appliances.



The products
will be accompanied by the
Environmental Product Declaration
EPD
to provide relevant information,
verified by third parties,
about the impact on the environment.
All the features of the Zherorisk® products
are certified by third-party
research institutions.

goods transportation and environmental protection

Zherorisk® products, in addition to being eco-compatible, safe for the environment and human health, with ultra-low VOC emissions, can be safely transported because they are free from substances that are harmful to the environment and not subject to the regulations included in the ADR regulation governing the transportation of hazardous goods.

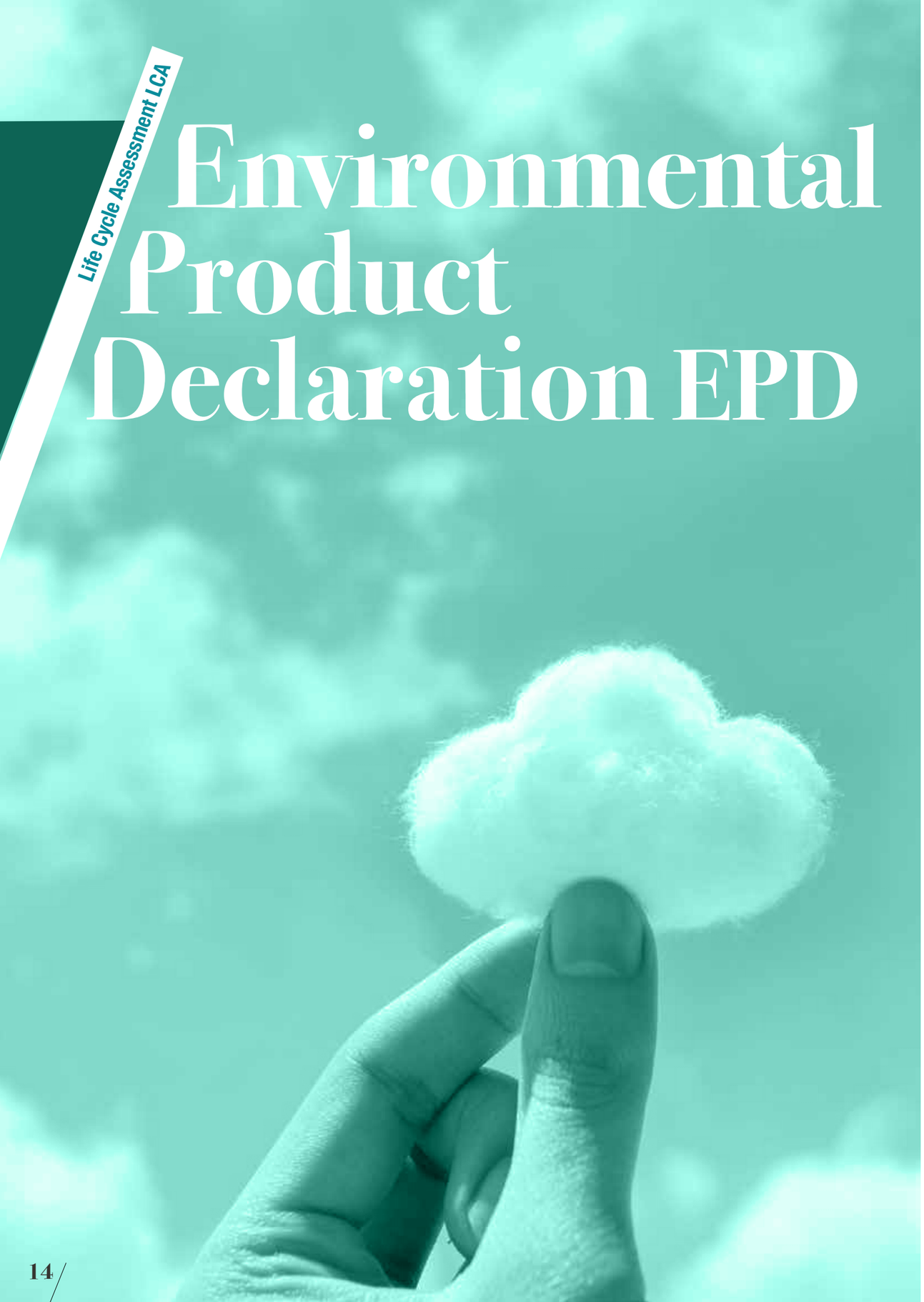
The path taken on toxicological studies and the reform of all chemical substances included in the **Reach/CLP** European standards that introduces the **United Nations globally harmonized system GHS**, has allowed the classification and labelling criteria to be harmonised, thus encouraging the free movement of goods whilst ensuring a high level of protection for man and the environment.

With the new basic substances developed as a result of the Zherorisk® project, it was possible to **obtain products with minimum risk labelling,** with no obligations imposed by the ADR regulation, allowing for significant cost savings in terms of shipping and logistical time frames.

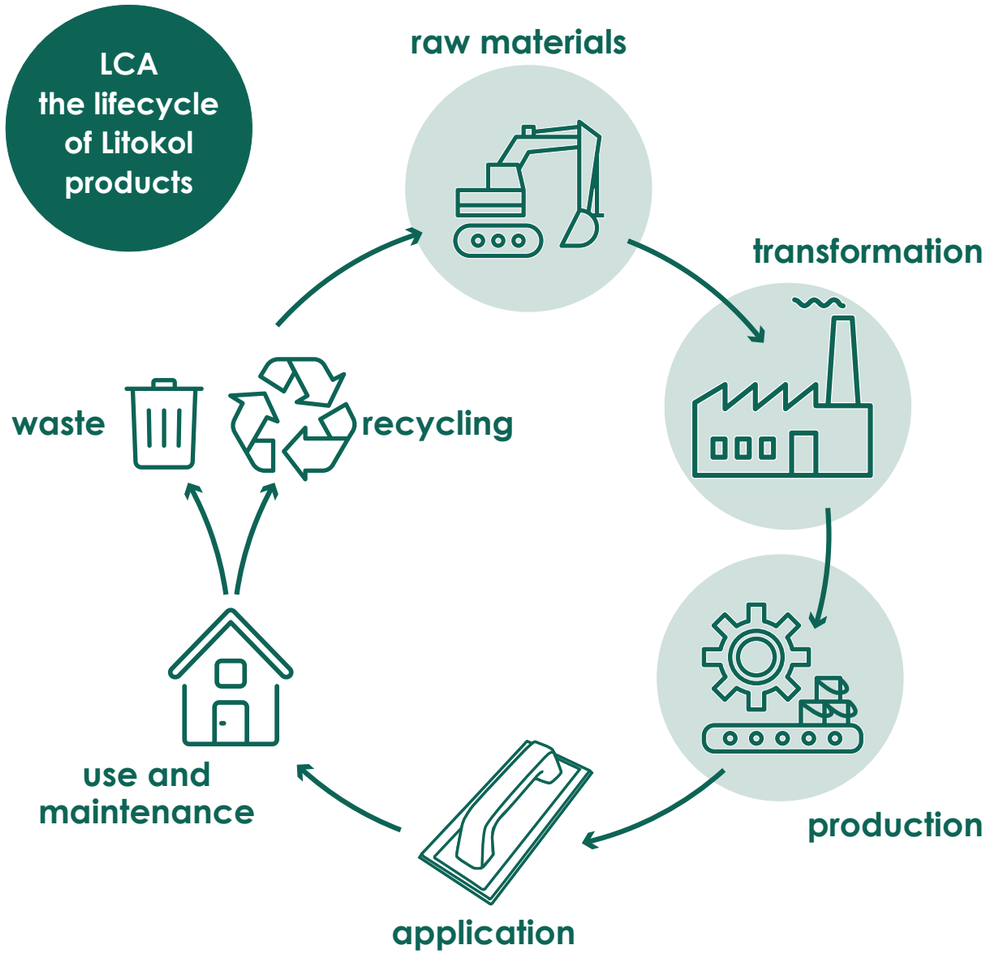
When it comes to international transportation over long distances, our products can also be transported by sea in **containers without IMO shipping certification** (International Maritime Organization).

Life Cycle Assessment LCA

Environmental Product Declaration EPD



Litokol has embarked on the path for the **EPD (Environmental Product Declaration)** emissions of its products. The EPD or Environmental Product Declaration is a tool for communicating objective, comparable and credible information relating to the environmental performance of products and services. The performances reported in the EPD are based on the methodological study **LCA (Life Cycle Assessment)** or Analysis of the Life Cycle of the products. The processes included in the LCA analysis were chosen according to the *"from cradle to gate"* parameter excluding the phases which do not depend directly on and are not controlled by Litokol.

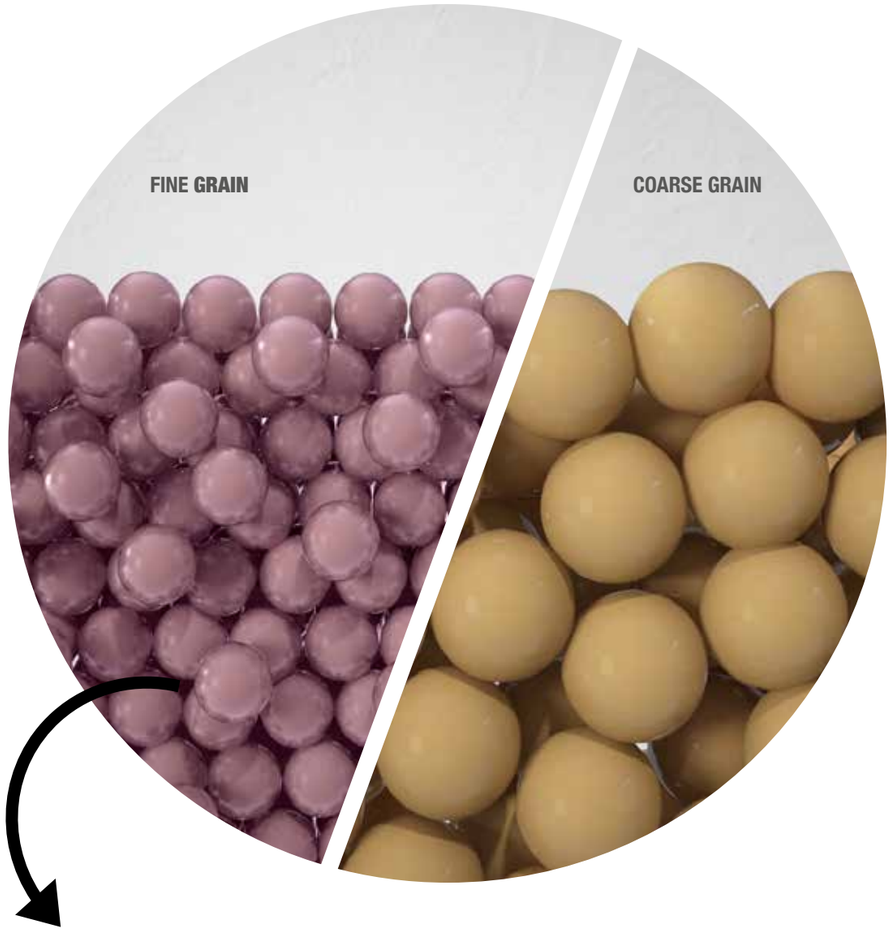


new quartz colouring system

The definition “EVO” identifies **new generation** Litokol products with the common features of eco-compatibility and safety for operators, people and transportation, resulting from the Zherorisk® project.
To support the process of innovation generated by the Zherorisk® project, the company has made strategic, technological and management choices which concern all the parties in the cycle and production chain.
This development process is enhanced and completed by a strategic analysis of ***“make or buy”***, which has led Litokol to undertake an important technological investment in know-how geared towards the **vertical integration upstream** of its supply chain.
With the expansion of the factory at the central site in Rubiera, an ultra-modern **quartz colouring system** has been installed based on an exclusive procedure which is a breakthrough in the panorama of this type of raw material.
This one-of-a-kind, latest generation system allows **fine-grain micro granules of quartz to be coloured** (unlike commonly used quartz) with an exclusive cold sintering process.
This innovative process, starting with the latest-generation Starlike® EVO epoxy grout, will allow Litokol to maintain a competitive advantage that will be difficult to beat, protected from any attempts of reverse engineering.
The use of **sintered quartz micro granules** in the new Starlike® EVO epoxy grout is a significant step forward compared to the previous version which was already the benchmark for the market.
This undertaking by Litokol fits in perfectly with its mission: **to produce innovative products using new technology, not to set itself apart, but to be different**.

Fine-grain coloured quartz micro granules coloured with an exclusive cold **sintering** process.

coloured quartz



FINE-GRAIN QUARTZ MICRO GRANULES COLD SINTERED AND COATED WITH A UNIFORM LAYER OF COLOUR WITH EXCLUSIVE LITOKOL TECHNOLOGY.

Coarse-grain standard quartz: more uneven and less compact surface making it easier for dirt to be picked up.

Fine-grain quartz: ultra-smooth and compact surface with a high aesthetic impact and minimum staining.

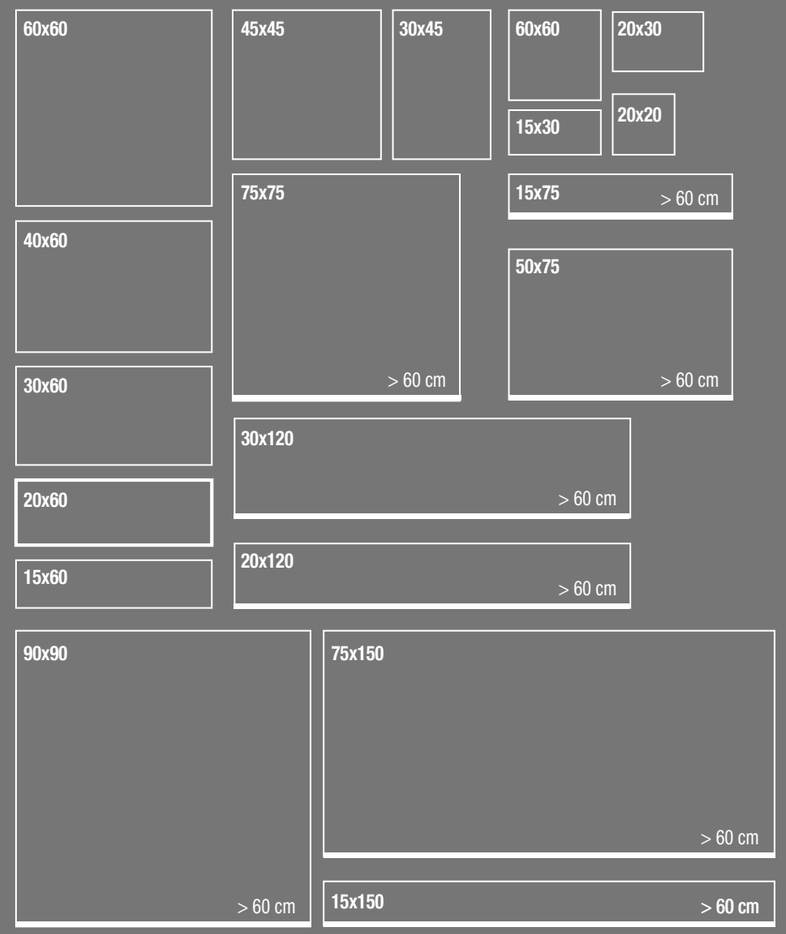
The fine grain of coloured quartz makes the mixture significantly more **fluid** when being applied, making it easier to fill the joints. From an aesthetic point of view, the grouting is smoother and more compact while the **colours assume a softer and more intense appearance** which blends perfectly with the surface of the tile, making the joint virtually invisible with tone-on-tone colours.

the company

For over fifty years, Litokol has focused on research and innovation, promoting **innovative solutions** all over the world for professionals in the building and design industry.

In addition to a widespread presence throughout Italy, Litokol now also means a capillary distribution on an international level. It is present in over 100 countries in the world and operates directly with sales companies or production facilities in strategic markets, such as Russia, Ukraine, Armenia, China and India .

Synopsis for choosing adhesives



Ceramic floor and wall tiles

The UNI 11493-1:2016 standard in force in Italy, which provides the indications required to choose materials, the correct design, use and installation of ceramic **tiles, defines large format tiles as having a side longer than 60 cm.**

Internal floors in residential and public/commercial settings (pedestrian areas)

TYPE OF SUBSTRATE	LITOKOL K17/K18	LITOKOL X11/X12	LITOFLEX PRO K80	LITOPLUS K55	POWERFLEX K50	SUPERFLEX K77	HYPERFLEX K100	LITOFAST K86	LITOSTONE K99	LITOFLOTT K88	LITOACRIL FIX/PLUS	LITOACRIL LA315/LA201	LITOELASTIC EVO
CLASSIFICATION ACCORDING TO EN 12004 - EN 12002	C1	C2TE	C2TE	C2TE	C2TE S1	C2TE S1	C2TE S2	C2FT	C2FE	C2FE	D1E (Fix) D2TE (Plus)	D1TE	R2T
LONGEST TILE SIDE ALLOWED (cm)													
CEMENTITIOUS SCREED OR LITOCEM BASE WITHOUT HEATING	≤ 60	≤ 60	≤ 120	≤ 120	> 120	> 120	> 120	≤ 120	≤ 120	≤ 120	≤ 30	≤ 30	> 120
CEMENTITIOUS SCREED OR LITOCEM BASE WITH HEATING	-	≤ 30	≤ 90	≤ 90	≤ 120	≤ 120	> 120	≤ 90	≤ 90	≤ 90	-	-	> 120
SULPHATE-BASED SCREED (ANHYDRITE) WITHOUT HEATING (1)	≤ 60	≤ 60	≤ 120	≤ 120	> 120	> 120	> 120	≤ 120	≤ 120	≤ 120	≤ 30	≤ 30	> 120
SULPHATE-BASED SCREED (ANHYDRITE) WITH HEATING (1)	-	≤ 30	≤ 90	≤ 90	≤ 120	≤ 120	> 120	≤ 90	≤ 90	≤ 90	-	-	> 120
CAST-IN-PLACE CONCRETE (2)	-	≤ 60	≤ 120	≤ 120	> 120	> 120	> 120	≤ 120	≤ 120	≤ 120	-	-	> 120
PRE-CAST CONCRETE		-	≤ 30	≤ 30	≤ 60	≤ 60	≤ 90	≤ 30	≤ 30	≤ 30	-	-	≤ 90
PRE-EXISTING SUBSTRATES MADE OF TILES, MOSAICS, STONE, AGGLOMERATE FLOORS, MARBLE TILES (3)	-	≤ 30	≤ 90	≤ 90	≤ 120	≤ 120	> 120	≤ 90	≤ 90	≤ 90	-	-	> 120
PRE-EXISTING SUBSTRATES MADE OF PARQUET, PVC, RESIN	-	-	-	-	-	-	-	-	-	-	-	-	> 120
PRE-EXISTING SUBSTRATES WITH ORGANIC ADHESIVE RESIDUE (4)	-	≤ 30	≤ 90	≤ 90	≤ 120	≤ 120	> 120	≤ 90	≤ 90	≤ 90	-	-	> 120
SUBSTRATES WATERPROOFED WITH LITOPROOF PLUS, HIDROFLEX, AQUAMASTER, ELASTOCEM, COVERFLEX	-	≤ 30	≤ 60	≤ 60	≤ 120	≤ 120	> 120	≤ 60	≤ 60	≤ 60	-	-	> 120
WOOD OR METAL SUBSTRATES	-	-	-	-	-	-	-	-	-	-	-	-	≤ 90

KEY: 1 - After treatment with Primer C or Primer X94 in the case of cementitious adhesives (C). Maximum humidity = 0.5% / 2 - Curing time: minimum 6 months
3 - After cleaning and degreasing with a solution of water and caustic soda / 4 - After treatment with Prepara Fondo EVO in the case of cementitious adhesives

Internal floors in public/commercial and industrial settings with heavy traffic

TYPE OF SUBSTRATE	LITOKOL X11 / X12	LITOFLEX PRO K80	LITOPLUS K55	POWERFLEX K50	SUPERFLEX K77
CLASSIFICATION ACCORDING TO EN 12004 - EN 12002	C2TE	C2TE	C2TE	CETE S1	C2TE S1
LONGEST TILE SIDE ALLOWED (cm)					
CEMENTITIOUS SCREED OR LITOCEM BASE WITHOUT HEATING	≤ 60	≤ 90	≤ 90	≤ 120	≤ 120
CAST-IN-PLACE CONCRETE (1)	≤ 90	≤ 120	≤ 120	> 120	> 120
PRE-CAST CONCRETE	-	≤ 30	≤ 30	≤ 60	≤ 60
PRE-EXISTING SUBSTRATES MADE OF TILES, MOSAICS, STONE, AGGLOMERATE FLOORS, MARBLE TILES (2)	≤ 30	≤ 90	≤ 90	≤ 120	≤ 120
PRE-EXISTING SUBSTRATES MADE OF RESILIENT FLOOR MATERIALS OR RESIN	-	-	-	-	-
PRE-EXISTING SUBSTRATES WITH ORGANIC ADHESIVE RESIDUE (3)	≤ 30	≤ 90	≤ 90	≤ 120	≤ 120
SUBSTRATES WATERPROOFED WITH LITOPROOF PLUS, HIDROFLEX, AQUAMASTER, ELASTOCEM, COVERFLEX	≤ 30	≤ 60	≤ 60	≤ 120	≤ 120
METAL SUBSTRATES	-	-	-	-	-

HYPERFLEX K100	LITOFAST K86	LITOSTONE K99	LITOFLOTT K88	LITOELASTIC EVO
C2TE S2	C2FT	C2FE	C2FE	R2T
> 120	≤ 90	≤ 90	≤ 90	> 120
> 120	≤ 120	≤ 120	≤ 120	> 120
≤ 90	≤ 30	≤ 30	≤ 30	≤ 90
> 120	≤ 90	≤ 90	≤ 90	> 120
-	-	-	-	> 120
> 120	≤ 90	≤ 90	≤ 90	> 120
> 120	≤ 60	≤ 60	≤ 60	> 120
> 120	-	-	-	≤ 90

KEY: 1 - After curing: minimum 6 months / 2 - After cleaning and degreasing with a solution of water and caustic soda / 3 - After treatment with Prepara Fondo EVO in the case of cementitious adhesives

Internal walls in residential, public/commercial and industrial settings

TYPE OF SUBSTRATE	LITOKOL K17/K18	LITOKOL X11/X12	LITOFLEX PRO K80	LITOPLUS K55	POWERFLEX K50	SUPERFLEX K77	HYPERFLEX K100	LITOFAST K86	LITOSTONE K99	LITOACRIL FIX/PLUS	LITOACRIL LA315/LA201	LITOELASTIC EVO
CLASSIFICATION ACCORDING TO EN 12004 - EN 12002	C1	C2TE	C2TE	C2TE	C2TE S1	C2TE S1	C2TE S2	C2FT	C2FE	D1E (Fix) D2TE (Plus)	D1TE	R2T
LONGEST TILE SIDE ALLOWED (cm)												
LIME/CEMENT-BASED PLASTER	≤ 60	≤ 90	≤ 90	≤ 90	> 120	> 120	> 120	≤ 90	≤ 90	≤ 60	≤ 60	> 120
GYPSUM-BASED PLASTER (1)	≤ 60	≤ 90	≤ 90	≤ 90	> 120	> 120	> 120	≤ 90	≤ 90	≤ 60	≤ 60	> 120
CAST-IN-PLACE CONCRETE (2)	-	≤ 60	≤ 90	≤ 90	> 120	> 120	> 120	≤ 90	≤ 90	≤ 30	≤ 30	> 120
PRE-CAST CONCRETE	-	≤ 60	≤ 90	≤ 90	> 120	> 120	> 120	≤ 90	≤ 90	≤ 30	≤ 30	> 120
PRE-EXISTING SUBSTRATES MADE OF OLD TILES, MOSAICS, STONE (3)	-	≤ 30	≤ 90	≤ 90	≤ 120	≤ 120	> 120	≤ 90	≤ 90	-	-	≤ 120
SUBSTRATES WATERPROOFED WITH LITOPROOF PLUS, HIDROFLEX, AQUAMASTER, ELASTOCEM, COVERFLEX	-	≤ 30	≤ 60	≤ 60	≤ 120	≤ 120	> 120	≤ 60	≤ 60	-	-	> 120
FIBRE CEMENT AND CEMENT-BASED PANELS	≤ 30	≤ 30	≤ 60	≤ 60	≤ 120	≤ 120	> 120	≤ 60	≤ 60	-	-	> 120
WOOD PANELS (CTBX AND CTBH) METAL SUBSTRATES	-	-	-	-	-	-		-	-	-	-	> 120
WATERPROOF AND NON-WATERPROOF PLASTERBOARD (4)	-	≤ 30	≤ 60	≤ 60	≤ 90	≤ 90	≤ 90	≤ 60	≤ 60	≤ 30*	≤ 30*	≤ 90
ELEMENTS IN AUTOCLAVED AERATED CONCRETE (5)	≤ 60	≤ 90	≤ 90	≤ 90	≤ 90	≤ 90	≤ 90	≤ 90	≤ 90	-	-	≤ 90
THERMAL INSULATED AND SOUNDPROOF PANELS - LIGHTWEIGHT PANELS	-	-	≤ 60	≤ 60	≤ 90	≤ 90	≤ 120	≤ 60	≤ 60	-	-	≤ 120

KEY: 1 - After treatment with Primer C or Primer X94 in the case of cementitious adhesives (C) / 2 - Curing time: minimum 6 months / 3 - After cleaning and de-greasing with a solution of water and caustic soda / 4 - After treatment with Primer C or Primer X94 for non-waterproof plasterboard in the case of cementitious adhesives / 5 - After treatment with Primer X94 /
(*) Only to be used for non-waterproof plasterboards without treatment with Primer

External floors in residential, public/ commercial and industrial settings

TYPE OF SUBSTRATE	LITOKOL K17/K18	LITOKOL X11/X12	LITOFLEX PRO K80	LITOPLUS K55	POWERFLEX K50	SUPERFLEX K77	HYPERFLEX K100	LITOFAST K86	LITOSTONE K99	LITOFLOTT K88	LITOELASTIC EVO
CLASSIFICATION ACCORDING TO EN 12004 - EN 12002	C1	C2TE	C2TE	C2TE	C2TE S1	C2TE S1	C2TE S2	C2FT	C2FE	C2FE	R2T
LONGEST TILE SIDE ALLOWED (cm)											
CEMENTITIOUS SCREED OR LITOCEM BASE WITHOUT HEATING	≤ 30	≤ 60	≤ 90	≤ 90	≤ 120	≤ 120	> 120	≤ 90	≤ 90	≤ 90	> 120
CAST-IN-PLACE CONCRETE (1)	≤ 30	≤ 60	≤ 90	≤ 90	≤ 120	≤ 120	> 120	≤ 90	≤ 90	≤ 90	> 120
PRE-CAST CONCRETE	-	-	≤ 30	≤ 30	≤ 60	≤ 60	≤ 90	≤ 30	≤ 30	≤ 30	≤ 90
PRE-EXISTING SUBSTRATES MADE OF TILES, MOSAICS, STONE, AGGLOMERATE FLOORS, MARBLE TILES (2)	-	≤ 30	≤ 90	≤ 90	≤ 120	≤ 120	> 120	≤ 90	≤ 90	≤ 90	> 120
SUBSTRATES WATERPROOFED WITH ELASTOCEM, COVERFLEX OR LITOPROOF EXTREME, AQUAMASTER	-	≤ 30	≤ 60	≤ 60	≤ 120	≤ 120	> 120	≤ 60	≤ 60	≤ 60	> 120
SUBSTRATES WATERPROOFED WITH RESINS TREATED WITH DRY-SHAKE QUARTZ TOPPING	-	-	-	-	≤ 120	≤ 120	> 120	-	-	-	> 120
METAL SUBSTRATES	-	-	-	-	-	-	-	-	-	-	≤ 90

KEY: 1 - Curing time: minimum 6 months / 2 - After cleaning and degreasing with a solution of water and caustic soda

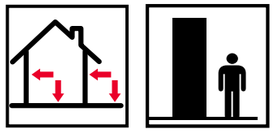
External walls

TYPE OF SUBSTRATE	LITOKOL X11/X12	LITOFLEX PRO K80	LITOPLUS K55	POWERFLEX K50
CLASSIFICATION ACCORDING TO EN 12004 - EN 12002	C2TE	C2TE	C2TE	C2TE S1
LIME/CEMENT-BASED PLASTER	≤ 30	≤ 60	≤ 60	≤ 90
CAST-IN-PLACE CONCRETE (1)	≤ 30	≤ 60	≤ 60	≤ 90
PRE-CAST CONCRETE	≤ 30	≤ 60	≤ 60	≤ 90
PRE-EXISTING SUBSTRATES MADE OF OLD TILES, MOSAICS, STONE (2)	-	-	-	≤ 30
SUBSTRATES WATERPROOFED WITH ELASTOCEM, COVERFLEX OR AQUAMASTER	-	≤ 30	≤ 30	≤ 90
FIBRE CEMENT PANELS	-	≤ 30	≤ 30	≤ 60
METAL SUBSTRATES	-	-	-	-

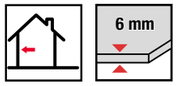
LONGEST TILE SIDE ALLOWED (cm)

SUPERFLEX K77	HYPERFLEX K100	LITOFAST K86	LITOSTONE K99	LITOELASTIC EVO
C2TE S1	C2TE S2	C2FT	C2FE	R2T
≤ 90	> 120	≤ 60	≤ 60	> 120
≤ 90	> 120	≤ 60	≤ 60	> 120
≤ 90	> 120	≤ 60	≤ 60	> 120
≤ 30	≤ 60	-	-	≤ 120
≤ 90	> 120	≤ 30	≤ 30	> 120
≤ 60	≤ 90	≤ 30	≤ 30	≤ 90
-	-	-	-	≤ 120

KEY: 1 - Curing time: minimum 6 months / 2 - After cleaning and degreasing with a solution of water and caustic soda
NB: In the case of tiled surfaces characterised by a significant vertical slip (> 3m) subject to high levels of tension in expansion joints due to the variations in air temperature and relative humidity and considering the safety risks posed by any tiles coming loose, it is recommended to consult the Litokol technical support service in order to precisely define the safest type of installation.



Installation of thin, large format slabs

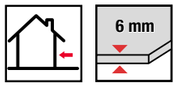


Internal wall installation of slabs with 6 mm width *Page 35*

SUBSTRATES
- civil building plaster, gypsum-based plaster, plasterboard, fibre cement panels.
- concrete, old ceramic, marble tiles, stone material.
- wood composition panels, metal.

Internal wall installation of slabs with 3-5-6 mm thickness with reinforced backing *Page 36*

SUBSTRATES
- civil building plaster, gypsum-based plaster, plasterboard, fibre cement panels.
- concrete, old ceramic, marble tiles, stone material.
- wood composition panels, metal.



External wall installation of slabs with 6 mm width *Page 37*

SUBSTRATES
- plaster.
- concrete.

External wall installation of slabs with 3-5-6 mm thickness with reinforced backing *Page 38*

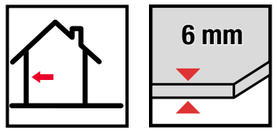
SUBSTRATES
- plaster.
- concrete.

Internal/external floor installation of slabs with no vehicle traffic and 3-5-6 mm thickness with reinforced backing *Page 39*

SUBSTRATES
- calcium sulphate-based cementitious screeds with heating, self-levelling, concrete, old ceramic, marble tiles, stone material.
- wood, PVC, rubber, linoleum, metal, resin.

External floor installation with no vehicle traffic of slabs with 5-6 mm thickness with reinforced backing *Page 39*

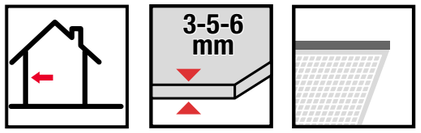
SUBSTRATE
- separation/waterproofing membrane stated as suitable by the manufacturer



Internal wall installation of slabs with 6 mm width				
Substrates: civil building plaster, gypsum-based plaster, plasterboard, fibre cement panels.				
At the discretion of the works supervisor.	**Slab format (cm)**	**Product**	**Class**	**Treatment**
Cementitious adhesives with **normal setting**	Up to 100x150 cm	Superflex K77 Powerflex K50	**C2TE S1**	On gypsum-based substrates and plasterboard, apply first PRIMER C or PRIMER X94
	All formats	Hyperflex K100	**C2TE S2**	
Cementitious adhesives with fast-setting	Up to 100X50 cm	Litostone K99 + Latexkol diluted 1:1 with water	**C2FE S1**	
	All formats	Litostone K99 + Latexkol	**C2F S2**	

Internal wall installation of slabs with 6 mm width				
Substrates: concrete, old ceramic, marble tiles, stone material.				
At the discretion of the works supervisor.	**Slab format (cm)**	**Product**	**Class**	**Treatment**
Cementitious adhesives with **normal setting**	Up to 100x150 cm	Superflex K77 Powerflex K50	**C2TE S1**	On old ceramic, marble tiles and stone material, first apply Prepara Fondo EVO
	All formats	Hyperflex K100	**C2TE S2**	
Cementitious adhesives with fast-setting	Up to 100x150 cm	Litostone K99 + Latexkol diluted 1:1 with water	**C2FE S1**	
	All formats	Litostone K99 + Latexkol	**C2F S2**	

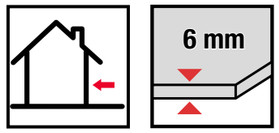
Internal wall installation of slabs with 6 mm width				
Substrates: wood composition panels, metal.				
At the discretion of the works supervisor.	**Slab format (cm)**	**Product**	**Class**	**Treatment**
Reactive adhesive	All formats	Litoelastic EVO	**R2T**	Not required



Internal wall installation of slabs with 3-5-6 mm thickness with reinforced backing				
Substrates: civil building plaster, gypsum-based plaster, plasterboard, fibre cement panels.				
At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Normal-setting cementitious adhesives	Up to 100x150 cm	Superflex K77 Powerflex K50	**C2TE S1**	On gypsum-based substrates and plasterboard, first apply PRIMER C or PRIMER X94
	All formats	Hyperflex K100	**C2TE S2**	
Fast-setting cementitious adhesives	Up to 100X50 cm	Litostone K99 + Latexkol diluted 1:1 with water	**C2FE S1**	
	All formats	Litostone K99 + Latexkol	**C2F S2**	

Internal wall installation of slabs with 3-5-6 mm thickness with reinforced backing				
Substrates: concrete, old ceramic tiles, marble tiles, stone material.				
At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Normal-setting cementitious adhesives	All formats	Hyperflex K100	**C2TE S2**	On old ceramic tiles, marble tiles and stone material, first apply Prepara Fondo EVO
Fast-setting cementitious adhesives	All formats	Litostone K99 + Latexkol	**C2F S2**	

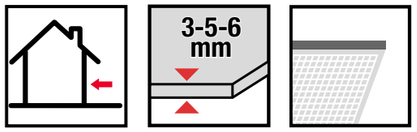
Internal wall installation of slabs with 3-5-6 mm thickness with reinforced backing				
Substrate: wood composition panels, metal.				
At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Reactive adhesive	All formats	Litoelastic EVO	**R2T**	Not required



External wall installation of slabs with 6 mm width				
Substrate: plaster.				
At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Normal-setting cementitious adhesives	All formats	Hyperflex K100	**C2TE S2**	Not required
Fast-setting cementitious adhesives	All formats	Litostone K99 + Latexkol	**C2F S2**	

External wall installation of slabs with 6 mm width				
Substrate: concrete.				
At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Normal-setting cementitious adhesives	All formats	Hyperflex K100	**C2TE S2**	Not required
Fast-setting cementitious adhesives	All formats	Litostone K99 + Latexkol	**C2F S2**	

For external wall installations, where tiled surfaces are characterised by a significant vertical slip (> 3 m) subject to high levels of tension in expansion joints due to the variations in air temperature and relative humidity and considering the safety risks posed by any tiles coming loose, it is recommended to consult the Litokol S.p.A technical support service in order to precisely define the safest type of installation.



External wall installation of slabs with 3-5-6 mm thickness with reinforced backing

Substrate: plaster.

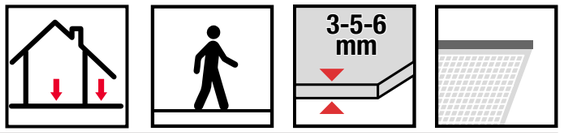
At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Normal-setting cementitious adhesives	Up to 100x150 cm	Hyperflex K100	**C2TE S2**	Not required
Reactive adhesive	All formats	Litoelastic EVO	**R2T**	
Fast-setting cementitious adhesives	Up to 100X50 cm	Litostone K99 + Latexkol	**C2F S2**	

External wall installation of slabs with 3-5-6 mm thickness with reinforced backing

Substrate: concrete.

At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Normal-setting cementitious adhesives	Up to 100x150 cm	Hyperflex K100	**C2TE S2**	Not required
Reactive adhesive	All formats	Litoelastic EVO	**R2T**	
Fast-setting cementitious adhesives	Up to 100X50 cm	Litostone K99 + Latexkol	**C2F S2**	

For exterinal wall installations, where tiled surfaces are characterised by a significant vertical slip (> 3 m) subject to high levels of tension in expansion joints due to the variations in air temperature and relative humidity and considering the safety risks posed by any tiles coming loose, it is recommended to consult the Litokol S.p.A technical support service in order to precisely define the safest type of installation.



Internal/external wall installation of slabs with no vehicle traffic and 3-5-6 mm thickness with reinforced backing

OUTDOORS provided that the substrates are covered (e.g. porches, covered balconies, etc.) and fully waterproofed.
The use of formats no bigger than 100x100 cm is recommended.

Substrates: calcium sulphate-based cementitious screeds with heating, self-levelling, concrete, old ceramic tiles, marble tiles, stone material.

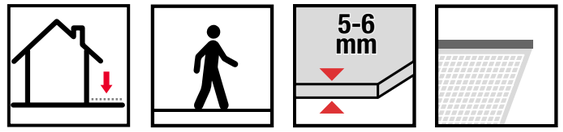
At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Normal-setting cementitious adhesives	Indoors: all formats	Hyperflex K100	**C2TE S2**	For gypsum-based, self-levelling substrates: PRIMER C For old ceramic tiles, marble tiles, stone material: Prepara Fondo EVO
	Outdoors: up to 100x100 cm			
Fast-setting cementitious adhesives	Indoors: all formats	Litostone K99 + Latexkol	**C2F S2**	
	Outdoors: up to 100x100 cm			

Internal/external wall installation of slabs with no vehicle traffic and 3-5-6 mm thickness with reinforced backing

OUTDOORS provided that the substrates are covered (e.g. porches, covered balconies, etc.) and fully waterproofed.
The use of formats no bigger than 100x100 cm is recommended.

Substrates: wood, PVC, rubber, linoleum, metal, resin.

At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Reactive adhesive	Indoors: all formats	Litoelastic EVO	**R2T**	Not required
	Outdoors: up to 100x100 cm			



External wall installation of slabs with no vehicle traffic and 5-6 mm thickness with reinforced backing

Substrate: separation/waterproofing membrane stated as suitable by the manufacturer

At the discretion of the works supervisor.	Slab format (cm)	Product	Class	Treatment
Normal-setting cementitious adhesives	Up to 100x100 cm	Hyperflex K100	**C2TE S2**	Not required
Fast-setting cementitious adhesives	Up to 100x100 cm	Litostone K99 + Latexkol	**C2F S2**	

Laying systems

Laying system index

System for laying **green marble** or moisture-sensitive marble and resin-based **reconstituted marble**

green marble

Products

1 - CONCRETE SUBSTRATE
2 - POLYTHENE SHEET
3 - LITOCEM or LITOCEM PRONTO SCREED
4 - LITOELASTIC EVO
5 - LITOCHROM 1-6
6 - OTTOPRIMER 1216 + OTTOSEAL S70

System for laying white **marble** or marble prone to staining

white marble

Products

1 - CONCRETE SUBSTRATE
2 - POLYTHENE SHEET
3 - LITOCEM or LITOCEM PRONTO SCREED
4 - LITOSTONE K99
5 - LITOCHROM 1-6
6 - OTTOPRIMER 1216 + OTTOSEAL S70

System for **waterproofing** and laying ceramic tiles on balconies and terraces

balconies terraces

with two-component waterproofing membranes

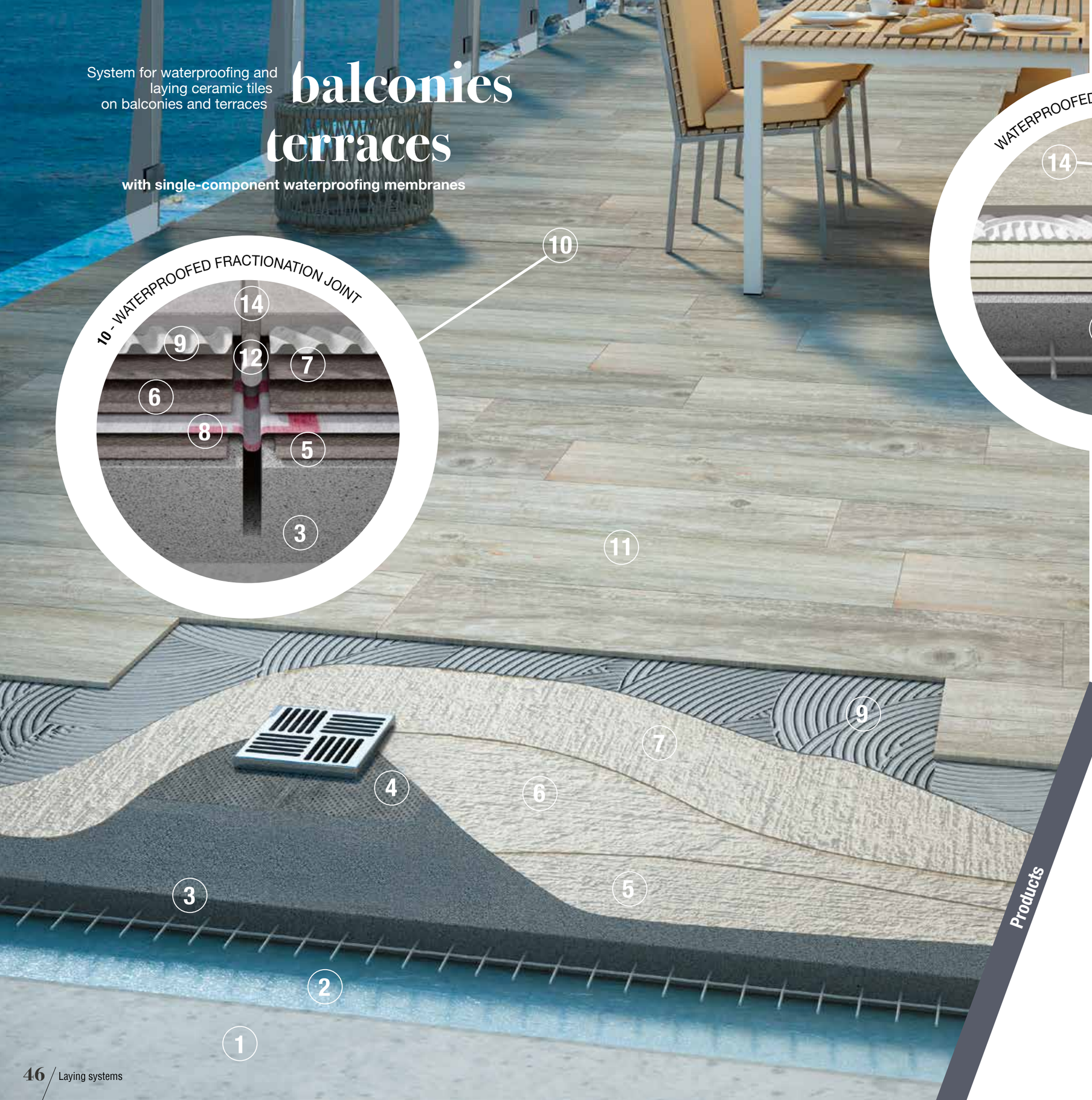
Products

1 - CONCRETE SUBSTRATE
2 - LITOCEM or LITOCEM PRONTO SCREED (sloping)
3 - LITOBAND SK Self-Adhesive Drain Collar
4 - COVERFLEX/ELASTOCEM
5 - FIBREGLASS MESH
6 - WATERPROOFED FRACTIONATION JOINT
7 - LITOBAND SK Tape
8 - LITOGAP
9 - SUPERFLEX K77 or POWERFLEX K50
10 - STARLIKE® EVO, EPOXYÉLITE EVO or LITOCHROM 3-15 (grouting joints)
11 - OTTOPRIMER 1216 + OTTOSEAL S70 (fractionation joint)

System for waterproofing and laying ceramic tiles on balconies and terraces

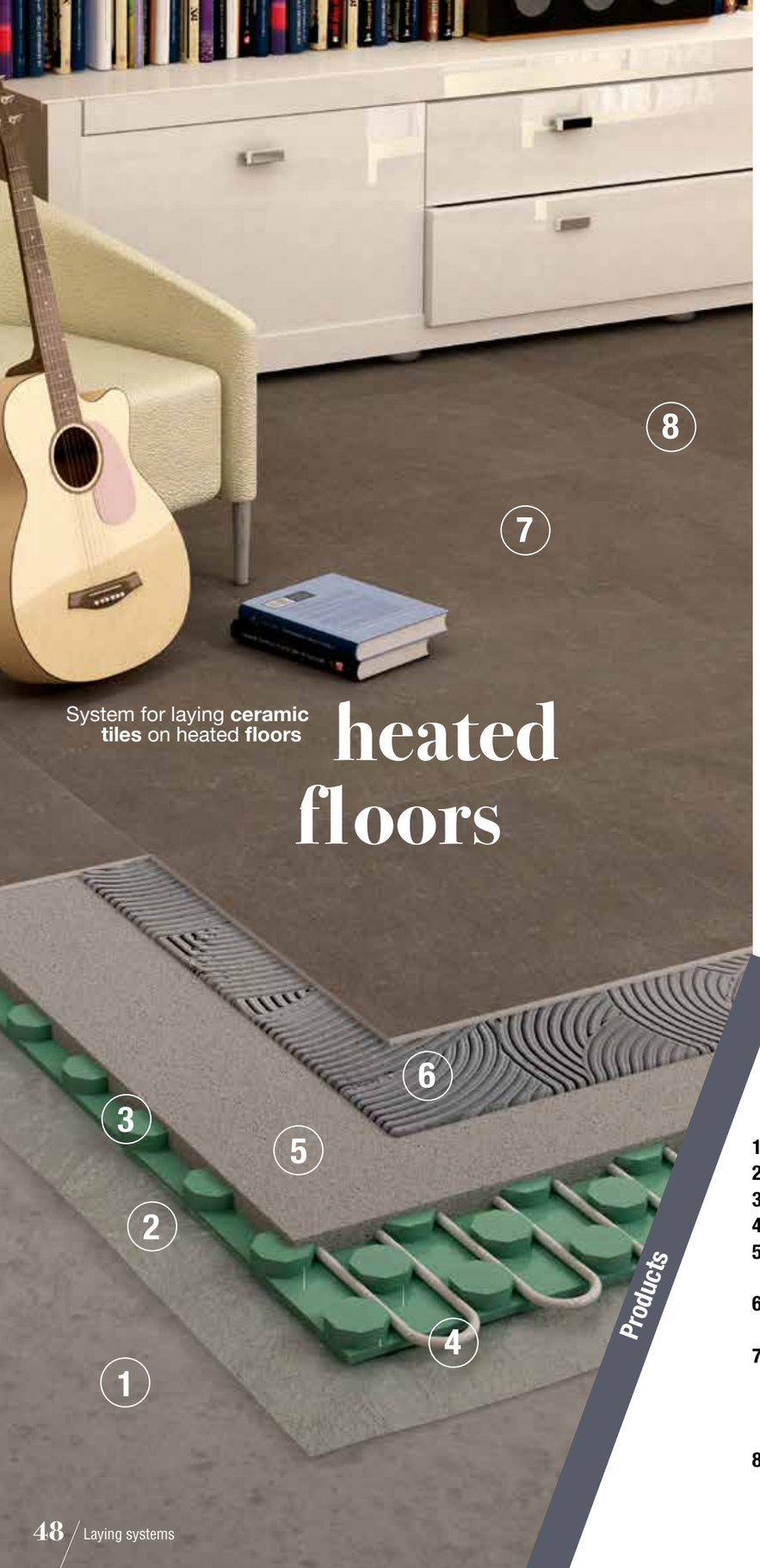
balconies terraces

with single-component waterproofing membranes



Products

1 - CONCRETE SUBSTRATE
2 - VAPOUR BARRIER
3 - LITOCEM or LITOCEM PRONTO SCREED (sloping)
4 - LITOBAND SK Self-Adhesive Drain Collar
5 - AQUAMASTER (first coat diluted with 10% water)
6 - AQUAMASTER (second coat)
7 - AQUAMASTER (third coat)
8 - LITOBAND Sk Tape
9 - SUPERFLEX K77, HYPERFLEX K100
10 - WATERPROOFED FRACTIONATION JOINT
11 - STARLIKE® EVO, EPOXYÉLITE EVO or LITOCHROM 3-15 (grouting joints)
12 - LITOGAP
13 - LITOSIDE
14 - OTTOPRIMER 1216 + OTTOSEAL S70 (perimeter and fractionation joint)



System for laying **ceramic tiles** on heated **floors**

heated floors

Products

1 - CONCRETE SUBSTRATE
2 - POLYTHENE SHEET
3 - INSULATING PANEL
4 - RADIANT SYSTEM
5 - LITOCEM SCREED
or LITOCEM PRONTO SCREED
6 - LITOFLEX PRO K80
or SUPERFLEX K77
7 - STARLIKE® EVO
or LITOCHROM 3-15
or LITOCHROM 1-6
FILLGOOD EVO
8 - OTTOPRIMER 1216
+ OTTOSEAL S70
(fractionation joint)

System for laying **porcelain stoneware** tiles on existing tiles

porcelain stoneware on existing tiles

Products

1 - OLD CERAMIC TILES
2 - PREPARA FONDO EVO
3 - LITOFLEX PRO K80 /SUPERFLEX K77/POWERFLEX K50
4 - PORCELAIN STONEWARE TILES
5 - STARLIKE® EVO, LITOCHROM 1-6
LITOCHROM 3-15
or FILLGOOD EVO

System for waterproofing indoor wet areas with **liquid** membranes

liquid membranes

1 - SUBSTRATE
2 - PRIMER SK
3 - LITOBAND SK Self-Adhesive Drain Collar
4 - HIDROFLEX (first coat)
5 - LITOBAND SK Internal corner (IC)
6 - LITOBAND SK Tape
7 - LITOBAND SK Pipes Collar
8 - HIDROFLEX (second coat)
9 - LITOFLEX K80 PRO
10 - CERAMIC TILES
11 - STARLIKE® EVO, EPOXYÉLITE EVO or LITOCHROM 1-6 (grouting joints)
12 - OTTOSEAL S100/105 or S70

System for waterproofing indoor wet areas with **flexible** sheets

flexible sheets

Products

1 - SUBSTRATE
2 - HIDROFLEX (first coat for the bonding of Litoband Plus)
3 - LITOPROOF PLUS
4 - LITOBAND SK Self-Adhesive Drain Collar
5 - HIDROFLEX (second coat for the bonding of Litoband Tape and covering the drain)
6 - LITOBAND SK internal corner (IC)
7 - LITOBAND Tape
8 - LITOBAND SK Pipes Collar
9 - HIDROFLEX (third coat for covering corners and joins)
10 - LITOFLEX PRO K80
11 - CERAMIC TILES
12 - STARLIKE® EVO, EPOXYÉLITE EVO or LITOCHROM 1-6 (grouting joints)
13 - OTTOSEAL S100/105 or S70

System for waterproofing and laying **ceramic tiles** or **mosaics** in **swimming pools** with

swimming pools

two-component waterproofing membranes

Products

1 - REINFORCED CONCRETE STRUCTURE
2 - LITOPLAN SMART
3 - IDROKOL X20 ADHESIVE CEMENT SLURRY (applied with a brush and consisting of 3 parts of Portland cement + 1 part water + 1 part IDROKOL X20 in equal quantities)
4 - LITOCEM or LITOCEM PRONTO SCREED
5 - COVERFLEX/ELASTOCEM
6 - FIBREGLASS MESH
7 - LITOBAND SK internal corner (IC)
8 - LITOBAND SK Tape
9 - LITOPLUS K55/LITOELASTIC EVO
10 - CERAMIC TILES
11 - GLASS MOSAIC
12 - STARLIKE® EVO, EPOXYÉLITE EVO or LITOCHROM 1-6 (grouting joints)
13 - OTTOPRIMER 1218 + OTTOSEAL S70

System for **waterproofing** and laying **ceramic tiles** or **mosaics** in **swimming pools**

swimming pools

with single-component waterproofing membranes

Products

1 - REINFORCED CONCRETE STRUCTURE
2 - LITOPLAN SMART
3 - IDROKOL X20 ADHESIVE CEMENT SLURRY (applied with a brush and consisting of 3 parts of Portland cement + 1 part water + 1 part IDROKOL X20 in equal quantities)
4 - LITOCEM or LITOCEM PRONTO SCREED
5 - AQUAMASTER (first coat diluted with 10% water)
6 - AQUAMASTER (second coat)
7 - AQUAMASTER (third coat)
8 - LITOPLUS K55/LITOELASTIC EVO
9 - STARLIKE® EVO, EPOXYÉLITE EVO or LITOCHROM 1-6 (grouting joints)
10 - OTTOPRIMER 1218 + OTTOSEAL S70

wet areas

System for **waterproofing and laying ceramic tiles or mosaics in spas, wellness centres and whirlpools**

Products

1 - LIGHTWEIGHT PANELS IN EXPANDED POLYSTYRENE SUPERFICIALLY COATED
2 - AQUAMASTER (first coat diluted with 10% water)
3 - AQUAMASTER (second coat)
4 - AQUAMASTER (third coat)
5 - LITOPLUS K55, HYPERFLEX K100, LITOELASTIC EVO, STARLIKE® EVO (used as adhesive)
6 - STARLIKE® EVO, EPOXYÉLITE EVO or LITOCHROM 1-6 (grouting joints)
7 - OTTOPRIMER 1218 + OTTOSEAL S70

thin slabs on existing tiles

System for laying **reinforced thin slab** floors on existing **tiles**

Products

1 - OLD TILES
2 - HYPERFLEX K100 LITOELASTIC EVO
3 - STARLIKE® EVO, EPOXYÉLITE EVO, LITOCHROM 1-6 or FILLGOOD EVO
4 - OTTOSEAL S100/105 or S70 (perimeter joint)

System for laying **porcelain stoneware** tiles on floors subject to strong chemical attack

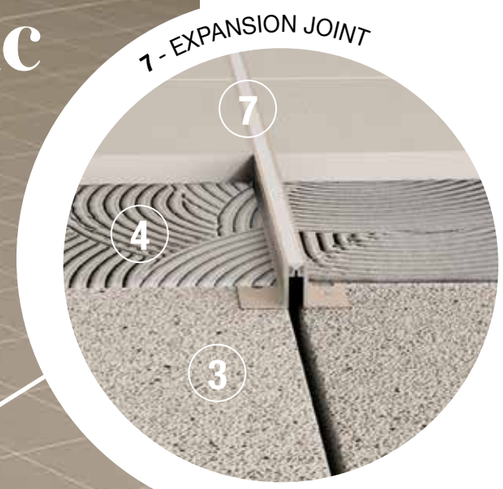
contact chemical substances

Products

1 - CONCRETE SUBSTRATE
2 - POLYTHENE SHEET
3 - LITOCEM or LITOCEM PRONTO SCREED
4 - EPOXYÉLITE EVO o STARLIKE® EVO (used as adhesive)
5 - TILES
6 - EPOXYÉLITE EVO/STARLIKE® EVO (grouting)
7 - OTTOPRIMER 1216 + OTTOSEAL S34 (perimeter joint)

System for laying thickened **porcelain stoneware** tiles or clinker tiles on floors subject to **heavy traffic**

heavy traffic

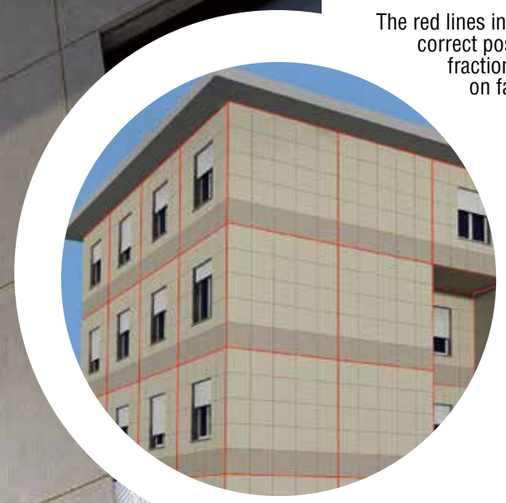


Products

1 - REINFORCED CONCRETE SUBSTRATE
2 - POLYTHENE SHEET
3 - REINFORCED LITOCEM or LITOCEM PRONTO SCREED
4 - LITOFLOTT K88
5 - THICKENED PORCELAIN STONEWARE or CLINKER TILES
6 - STARLIKE® EVO or EPOXYÉLITE EVO (grouting joints)
7 - EXPANSION JOINT

System for laying **ceramic tiles** on **façades**

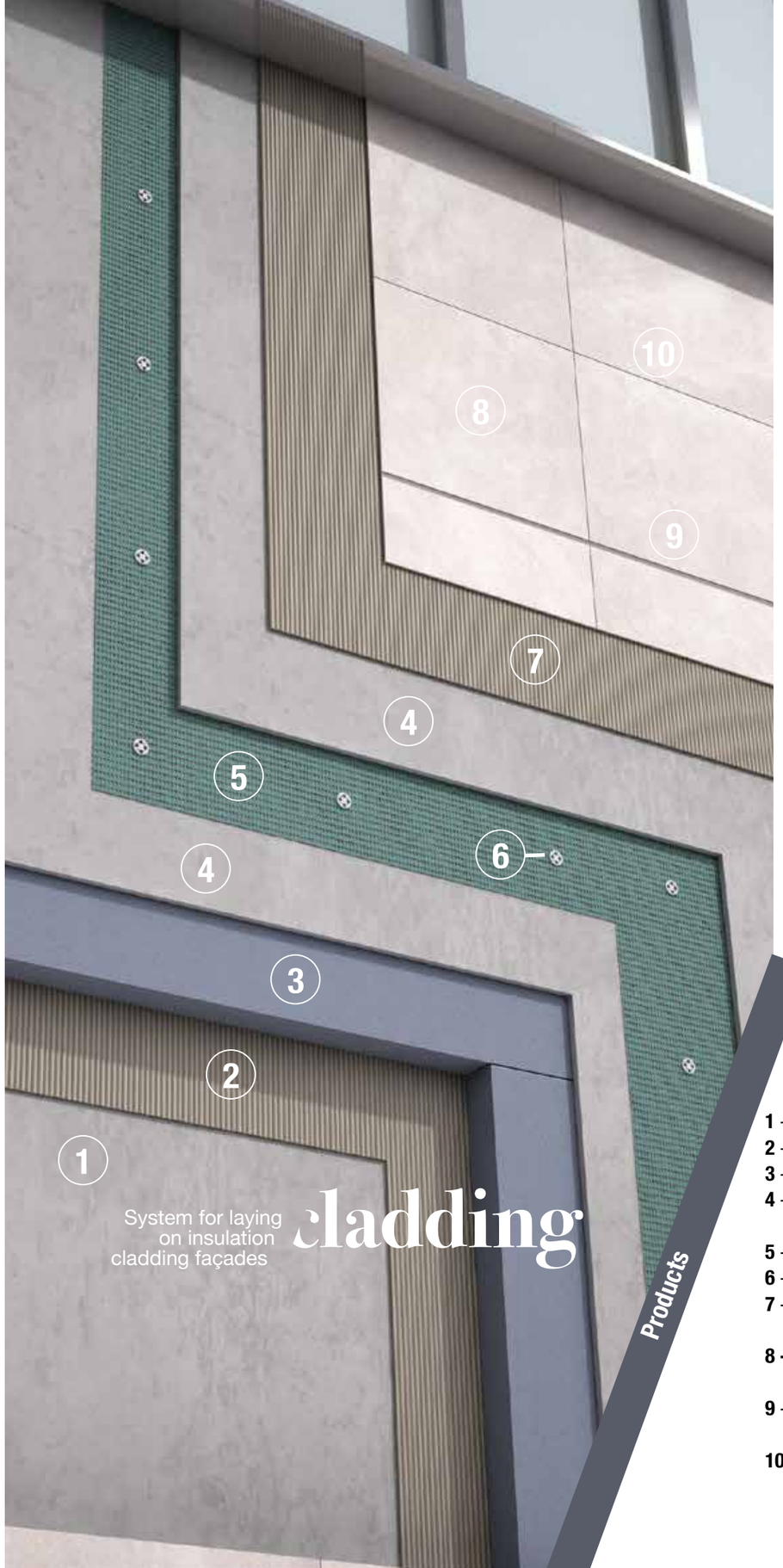
façade



The red lines indicate the correct position of the fractionation joints on façades.

Products

1 - CEMENTITIOUS or CONCRETE PLASTER
2 - HYPERFLEX K100/SUPERFLEX K77/POWERFLEX K50 LITOELASTIC EVO
3 - STARLIKE® EVO
- EPOXYÉLITE EVO
- LITOCHROM 1-6/3-15
- FILLGOOD EVO
4 - OTTOPRIMER 1216 + OTTOSEAL S100/105 or S70



System for laying on insulation cladding façades

cladding

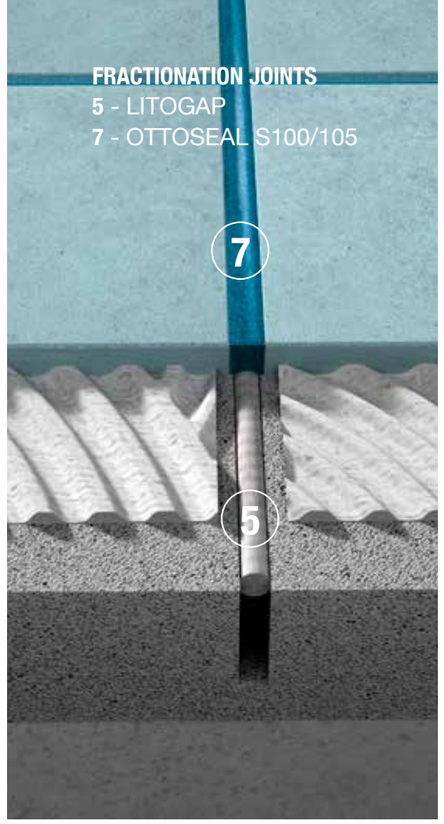
Products

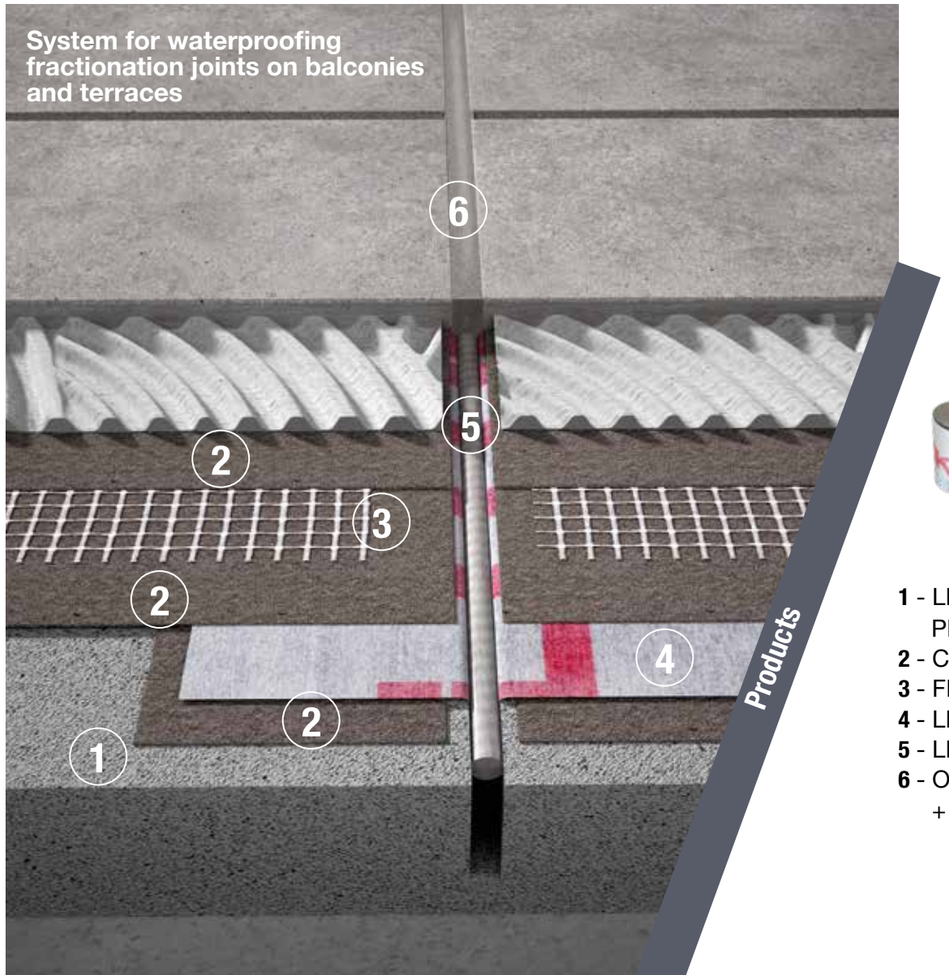
1 - CONCRETE
2 - ADHESIVE
3 - INSULATING PANELS
4 - STRUCTURAL PLASTER WITH LOW MODULUS
5 - FIBREGLASS MESH
6 - WALL PLUGS
7 - HYPERFLEX K100 or LITOELASTIC EVO
8 - THIN PORCELAIN STONEWARE slab
9 - FRACTIONATION JOINT with OTTOSEAL S70
10 - LITOCHROM 1-6 or 3-15, FILLGOOD EVO

System for laying ceramic tiles on **metal** surfaces

metal surfaces

1 - SMOOTH METAL SHEET
2 - LITOELASTIC EVO
3 - CERAMIC TILES
4 - STARLIKE® EVO or EPOXYÉLITE EVO
5 - OTTOSEAL S100/105 or S70 (perimeter joint)





joints

System for **perimeter** and **fractionation joints** done in-situ

1 - LITOCEM or LITOCEM PRONTO SCREED
2 - COVERFLEX/ELASTOCEM
3 - FIBREGLASS MESH
4 - LITOBAND SK Tape
5 - LITOGAP
6 - OTTOPRIMER 1216 + OTTOSEAL S70

existing ceramic tiles

Products

System for creating smooth surfaces with Starlike® EVO on top of **existing ceramic tiles**

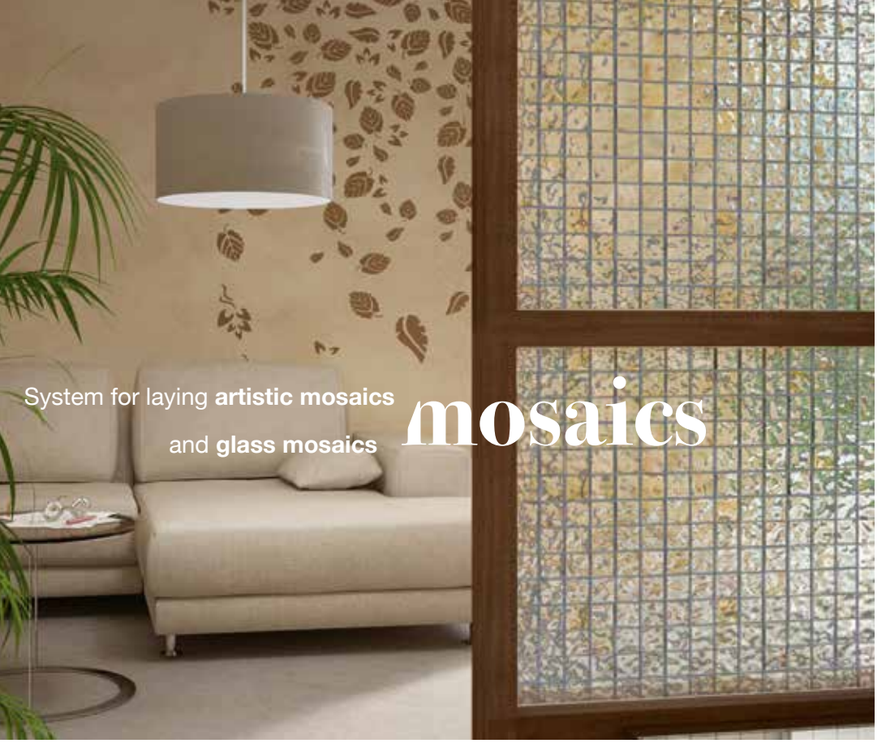
1 - EXISTING CERAMIC TILES
2 - DECOR PRIMER FONDO (first coat)
3 - FIBREGLASS MESH (only for laying on top of existing ceramic tiles)
4 - DECOR PRIMER FONDO (second coat)
5 - STARLIKE® EVO + STARLIKE® DECOR (first coat “zero” smoothing)
6 - STARLIKE® EVO + STARLIKE® DECOR (second coat “zero”- cloudy effect)
7 - STARLIKE® EVO + STARLIKE® DECOR (third coat “zero smoothing - smooth finish - covering effect)
8 - Decoration created with Starlike® EVO and STENDECOR, Hydrolux EVO matte or satin transparent finish

internal walls

Products

System for creating surfaces with Starlike®EVO with decorative finish for **internal walls**

1 - RAW CEMENTITIOUS PLASTER
2 - PRIMER C
3 - DECOR PRIMER FONDO
4 - STARLIKE® EVO + STARLIKE® DECOR (first coat “zero” smoothing)
5 - STARLIKE® EVO + STARLIKE® DECOR (second coat “zero” smoothing - cloudy effect)
6 - STARLIKE® EVO + STARLIKE® DECOR (third coat “zero” smoothing - smooth finish, wet on wet effect)
7 - Decoration created with Starlike® EVO and STENDECOR, Hydrolux EVO matte or satin transparent finish



System for laying **artistic mosaics** and **glass mosaics**

mosaics

Artistic mosaic

The special translucent colour of Starlike® Crystal EVO allows the product applied in the joints to absorb the colour of the transparent mosaics and thus, modify the colour to match the mosaics.

1 - LITOELASTIC EVO
2 - STARLIKE® CRYSTAL EVO (sealing joints)

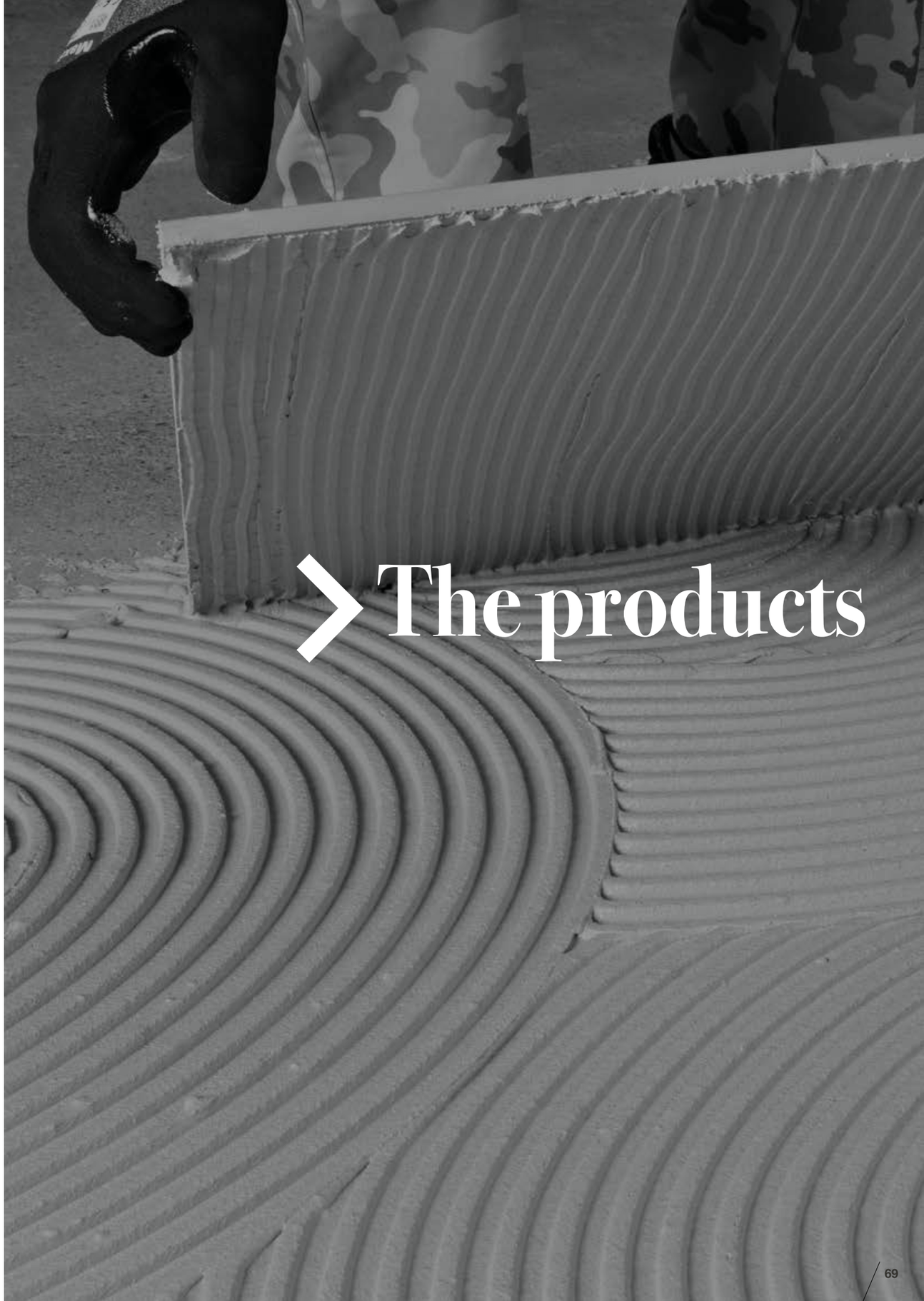
Glass mosaic on transparent substrate

In the case of transparent glass mosaics mounted on paper, backlit internal walls can be created consisting of transparent glass or plexiglass substrates. In this case, bonding will be done with a suitable transparent adhesive in tubes.

Products

Bonding on plexiglass

1 - OTTOPRIMER 1217
2 - OTTOCOLL M501 TRANSPARENT (only for bonding glass mosaics on transparent or backlit supports)
3 - STARLIKE® CRYSTAL EVO (sealing joints)



The products

Litocem

Normal setting and fast-drying special hydraulic binder for screeds indoors and outdoors.

TECHNICAL FEATURES
Colour: Grey
Mixing ratios:
Litocem 20 kg (1 bag)
Fine gravel 0/8 mm = 170-210 kg
Water = 0-13 litres (depending on the humidity of the aggregates)
Mixing time: 5-10 minutes
Mix consistency: Wet earth
Mixture life: Approx. 1 hour
Application temperatures allowed: From +5°C to +35°C
Set to light foot traffic: 12 hours
Ready for use: 7 days
Perform cementitious levelling: After 5-7 days
Waiting time for laying floors:
Ceramic tiles: 24 hours
Natural stone: 3 days
Parquet, PVC, linoleum, carpet: 2 weeks
Consumption: 2-2.5 kg/m² for every cm of thickness
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

SPEED

Litocem Pronto

Premixed ready-for-use normal-setting fast-drying controlled shrinkage mortar for indoor and outdoor screeds. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: Grey
Mix ratio:
Water = 1.6 litres of water per 25 kg bag
Mixing time: 5 - 10 minutes
Mix consistency: Wet earth
Apparent volumetric mass of the mixture: 2,100 kg/m³
Mixture life: 60 minutes
Application temperatures allowed:
From +5°C to +35°C
Set to light foot traffic: After 12 hours
Applicable thicknesses:
Adhering screeds: from 20 to 40 mm
Floating or unbonded screeds: 40 to 80 mm
Maximum thickness: ≤ 80 mm
Laying of tiles:
Ceramic: 24 hours
Natural stone and resin agglomerates: 2 days
Parquet and resilient floor materials: 4 days
Cleaning: The equipment must be cleaned from product residue with water before the product hardens.
Adhesive cement slurry consumption:
0.50 - 0.8 kg/m² depending on the substrate surface
Litocem Pronto consumption: 18 - 20 kg/m² per cm of thickness depending on the degree of compaction
Storage:
12 months in original packaging in a dry place.
Packaging: 25 kg bags

CT C30-F6 EN 13813
SPEED

Litoliv S40 Eco

Quick-hardening and drying self-levelling cementitious mortar, fibre-reinforced, for the levelling of substrates of 3 to 40 mm thickness. For indoors and outdoors. Product with ultra-low volatile organic compound emissions (VOC).

TECHNICAL FEATURES
Colour: Pinkish grey
Mix ratio:
Water = 4.8 litres for 1 x 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Self-levelling fluid
Mixture life: Approx. 20 minutes
Application temperatures allowed: From +5°C to +35°C
Maximum application thickness: 40 mm
Consumption: 1.6 kg/m² per every mm of thickness
Set to light foot traffic: 6 hours
Waiting time for bonding:
Ceramic tiles and natural stone: 12 hours
Resilient floor materials and parquet: 24 hours
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

CT C20-F5 EN 13813
SPEED
3-40 mm

Litoliv Extra 15

Ultra-quick drying and hardening self-levelling cementitious mortar for substrates from 1 to 15 mm. Internal use. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: Grey
Mix ratio:
Water = 5.2-5.6 litres of water for 1 x 20 kg bag
Mix curing time: 3 minutes
Mix consistency: Self-levelling fluid
Mixture life:
About 30 minutes at a temperature of +23°C
Application temperatures allowed: From +5°C to +35°C
Applicable thicknesses: From 1 to 15 mm per coat
Consumption: 1.6 kg/m² per every mm of thickness
Set to light foot traffic: About 3 hours at a temperature of +23°C
Waiting time for bonding:
Ceramic, natural stone, resilient floor material and textiles: 12 hours
Parquet: 24 hours
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

CT C30-F7 EN 13813
SPEED
1-15 mm

Litoliv Express

Quick-hardening and drying fibre-reinforced self-levelling cementitious mortar for the levelling of substrates with a thickness of 3 to 40 mm indoors. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: Grey
Mix ratio:
Water = 4.4 - 4.8 litres of water per 20 kg bag
Mix curing time: 3 minutes
Mix consistency: Self-levelling fluid
Mixture life:
About 30 minutes at a temperature of +23°C
Application temperatures allowed: From +5°C to +35°C
Applicable thicknesses: From 3 to 40 mm per coat
Consumption: 1.6 kg/m² per every mm of thickness
Set to light foot traffic: About 3 hours at a temperature of +23°C
Waiting time for bonding: 24 hours
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

CT C20-F5 EN 13813
SPEED
3-40 mm

Litoplan Smart

Cementitious thixotropic levelling layer featuring rapid hardening and drying for vertical and horizontal applications indoors and outdoors in a range of thicknesses from 1 to 25 mm. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: Grey
Mixing ratios:
Water = 4-4.8 litres of water per 20 kg bag.
Mix curing time: 5 minutes
Mix consistency: Thixotropic -Plastic
Mixture life:
About 60 minutes at a temperature of +23°C
Application temperatures allowed: From +5°C to +35°C
Applicable thicknesses: From 1 to 25 mm per coat
Consumption: 1.6 kg/m² per every mm of thickness
Set to light foot traffic: About 3 hours at a temperature of +23°C
Waiting time for bonding:
Ceramic tiles and natural stone: 4-6 hours
Parquet, textiles and resilient floor materials: 24 hours
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

CT C16-F5 EN 13813
SPEED
1-25 mm

Classification of cementitious adhesives according to the EN 12004 standard

TYPE	CLASS					
C	1	F	S1	S2	T	E
	2	F	S1	S2	T	E

KEY		
C1	normal-setting cementitious adhesive	
C2	improved cementitious adhesive	
F	Fast	fast-setting adhesive (bonding ≥ 0.5 N/mm² after less than 6 hours)
S1	deformable adhesive (cementitious only)	(2,5 mm ≤ S1 < 5 mm)
S2	highly deformable adhesive (cementitious only)	(S2 ≥ 5 mm)
T	reduced slip	≤ 0,5 mm
E	Extended open time	(≥ 0,5 N/mm² after less than 30 min)

Key

- Target destinations
- Suitable for laying on heated floors
- Dust Reduction action
- Colour grey
- Suitable for laying in swimming pools
- Suitable for elastic and vibrating substrates or metal surfaces
- Colour white
- No vertical slip
- Suitable for laying on top
- Rapid hardening

Litokol K17 - Litokol K18

Normal cementitious adhesive for the laying of ceramic tiles indoors on floors and walls and outdoors on floors. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES

Colour: Grey (K17) - White (K18)
Mix ratio:
Water = 4.8 litres of water per 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Creamy mortar
Mixture life: Approx. 8 hours
Application: Notched trowel
Maximum application thickness: 5 mm
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 20 minutes
Waiting time for grouting:
Walls: 6 - 8 hours - Floor: 24 hours
Set to light foot traffic: 24 hours

Ready for use: 7 days
Temperature of use: From -30°C to +80°C
How to clean equipment:
With water when product is fresh.
Mechanically when product has hardened.
Consumption:
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 4 kg/m²
Back-buttering: 5 kg/m²
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

C1 EN 12004

Litokol X11 - Litokol X12

No vertical slip high-performance cementitious adhesive with extended open time for the indoor and outdoor installation of ceramic tiles on walls and floors. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES

Colour: Grey (X11) - White (X12)
Mix ratio:
Water = 6 litres of water per 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Creamy thixotropic mortar
Mixture life: Approx. 8 hours
Application: Notched trowel
Maximum application thickness: 5 mm
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Waiting time for grouting:
Walls: 4 - 8 hours - Floor: 24 hours
Set to light foot traffic: 24 hours

Ready for use: 7 days
Temperature of use: From -30°C to +80°C
How to clean equipment:
With water when product is fresh.
Mechanically when product has hardened.
Consumption:
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 4 kg/m²
Back-buttering: 5 kg/m²
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

C2TE EN 12004 — NO VERTICAL SLIP

Litoflex Pro K80

No vertical slip high-performance cementitious adhesive with extended open time for the indoor and outdoor installation of ceramic tiles on walls and floors. Suitable for installation over existing tiles and heated floors. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES

Colour: White or Grey
Mix ratio:
Water = 5.4-5.8 litres of water per 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Creamy thixotropic mortar
Specific weight of mix: 1.65
Mixture life: Approx. 8 hours
Application: Notched trowel
Maximum application thickness: 5 mm
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Waiting time for grouting:
Walls: 6 - 8 hours - Floor: 24 hours

Set to light foot traffic: 24 hours
Ready for use: 7 days
Temperature of use: From -30°C to +80°C
How to clean equipment:
With water when product is fresh.
Mechanically when product has hardened.
Consumption: 6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 4 kg/m²
Back-buttering: 5 kg/m²
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

C2TE EN 12004 — NO VERTICAL SLIP

Litoplus K55

Superwhite cementitious adhesive, enhanced performance, with no vertical slip and extended open time for the laying of ceramic tiles and mosaics indoors and outdoors on floors and walls. Suitable for swimming pools, overlaying and heated floors. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES

Colour: White
Mix ratio:
Water = 7 litres of water per 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Creamy thixotropic mortar
Mixture life: Approx. 8 hours
Application: Notched trowel
Maximum application thickness: 5 mm
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Waiting time for grouting:
Walls: 6 - 8 hours - Floor: 24 hours
Set to light foot traffic: 24 hours

Ready for use: 7 days
Temperature of use: From -30°C to +80°C
How to clean equipment:
With water when product is fresh.
Mechanically when product has hardened.
Consumption: 3.5 mm trowel: 1.8 kg/m²
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 4 kg/m²
Back-buttering: 5 kg/m²
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

C2TE EN 12004 — NO VERTICAL SLIP

Powerflex K50

High-performance, no vertical slip deformable cementitious adhesive and extended open time for laying porcelain stoneware and large format, moisture-resistant natural stone on floors and walls indoors and outdoors. Suitable for laying over existing substrates and on heated floors.

TECHNICAL FEATURES
Colour: White or Grey
Mix ratio:
Water = 5.8 litres for 1 x 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Creamy thixotropic mortar
Mixture life: More than 8 hours
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Maximum application thickness: 5 mm
Consumption: 6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 4 kg/m²
Back-buttering: 5.5 kg/m²
Set to light foot traffic: 24 hours
Ready for use: 7 days
Waiting time for grouting:
Floors: approx. 24 hours
Walls: about 6 - 8 hours
Storage:
12 months in original packaging when stored in a dry place
Packaging: 20 kg bags

C2TE S1 EN 12004 · NO VERTICAL SLIP · ÉMISSIONS DANS L'AIR INTÉRIEUR* A+

Superflex K77

High-performance, no vertical slip deformable cementitious adhesive with Dust Reduction action and extended open time for the indoor and outdoor installation of porcelain stone and large format, moisture-resistant natural stone, glass and ceramic mosaic tiles, on walls and floors. Suitable for installation over existing tiles and heated floors.

TECHNICAL FEATURES
Colour: White or grey
Mix ratio:
Water = 6.4 - 6.8 litres for 1 x 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Creamy thixotropic mortar
Mixture life: More than 8 hours
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 40 minutes
Maximum application thickness: 5 mm
Consumption:
3.5 mm trowel: 1.8 kg/m²
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 4 kg/m²
Back-buttering: 5.5 kg/m²
Set to light foot traffic: 24 hours
Ready for use: 7 days
Waiting time for grouting:
Floors: approx. 24 hours
Walls: about 6 - 8 hours
Storage: 12 months in original packaging in a dry place.
Packaging: 20 kg bags

C2TE S1 EN 12004 · DUST REDUCTION · NO VERTICAL SLIP · ÉMISSIONS DANS L'AIR INTÉRIEUR* A+

Hyperflex K100

High-performance, no vertical slip, highly deformable cementitious adhesive with Dust Reduction action and extended open time for laying ceramic tiles and large format, moisture-resistant natural stone, glass and ceramic mosaic tiles, on walls and floors, indoors and outdoors. Suitable for thin, fibre-reinforced slabs, installation over existing substrates and on heated floors. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: White or Grey
Mix ratio:
Water = 6-6.4 litres of water per 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Creamy thixotropic mortar
Mixture life: Approx. 8 hours
Application: Notched trowel
Maximum application thickness: 5 mm
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Waiting time for grouting:
Walls: 6 - 8 hours - Floor: 24 hours
Set to light foot traffic: 24 hours
Ready for use: 7 days
Temperature of use: From -30°C to +80°C
How to clean equipment:
With water when product is fresh.
Mechanically when product has hardened.
Consumption: 3.5 mm trowel: 1.5 kg/m²
6 mm trowel: 2.1 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 3.5 kg/m²
Back-buttering: 4.5 kg/m²
Storage: 12 months in original packaging in a dry place.
Packaging: 20 kg bags

C2TE S2 EN 12004 · DUST REDUCTION · NO VERTICAL SLIP · GEV-EMICODE EC1 PLUS very low emission · ÉMISSIONS DANS L'AIR INTÉRIEUR* A+

Litofast K86

High-performance, no vertical slip, fast setting and drying cementitious adhesive for laying ceramic tiles on walls and floors, indoors and outdoors. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: Grey
Mix ratio:
Water = 4.9-5.1 litres of water for 1 x 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Creamy thixotropic mortar
Maximum application thickness: 5 mm
Mixture life: Approx. 1 hour
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 20 minutes
Maximum application thickness: 5 mm
Consumption:
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 4 kg/m²
Back-buttering: 5 kg/m²
Set to light foot traffic: 6 hours
Ready for use: 2 days
Waiting time for grouting: Approx. 6 hours
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

C2FT EN 12004 · SPEED · NO VERTICAL SLIP · GEV-EMICODE EC1 PLUS very low emission · ÉMISSIONS DANS L'AIR INTÉRIEUR* A+

Litostone K99

High-performance, no vertical slip, fast setting and drying cementitious adhesive with extended open time for laying ceramic tiles on walls and floors, indoors and outdoors. Suitable for installation over existing tiles and heated floors. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: White
Mix ratio:
Water = 5-5.2 litres of water for 1 x 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Creamy mortar
Maximum application thickness: 5 mm
Mixture life: Approx. 1 hour
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Maximum application thickness: 5 mm
Consumption:
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 4 kg/m²
Back-buttering: 5 kg/m²
Set to light foot traffic: 6 hours
Ready for use: 24 hours
Waiting time for grouting: Approx. 6 hours
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

C2FE EN 12004 · SPEED · GEV-EMICODE EC1 PLUS very low emission · ÉMISSIONS DANS L'AIR INTÉRIEUR* A+

Litoflott K88

High-performance self-wetting cementitious adhesive, fast setting and drying with extended open time for laying ceramic tiles and natural stone floors, indoors and outdoors. Suitable for installation over existing tiles and heated floors. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: Grey
Mix ratio:
Water = 4.2-4.4 litres of water for 1 x 20 kg bag
Mix curing time: 5 minutes
Mix consistency: Semi-fluid mortar
Maximum application thickness: 10 mm
Mixture life: Approx. 1 hour
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Adjustability time: Approx. 30 minutes
Consumption:
10 mm trowel: 5 kg/m²
15 mm trowel: 7 kg/m²
Set to light foot traffic: 6 hours
Ready for use: 24 hours
Waiting time for grouting: Approx. 6 hours
Storage:
12 months in original packaging in a dry place.
Packaging: 20 kg bags

C2FE EN 12004 · SPEED · GEV-EMICODE EC1 PLUS very low emission · ÉMISSIONS DANS L'AIR INTÉRIEUR* A+

Litoacril Fix

White, ready-for-use, dispersion adhesive with extended open time for laying ceramic tiles on floors and walls indoors. Ideal for application on gypsum-based plaster with no need to apply a primer beforehand.

TECHNICAL FEATURES
Colour: White
Application: notched trowel
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Maximum application thickness: 3 mm
Consumption:
3.5 mm trowel: 1.5 kg/m²
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 3.5 kg/m²
Insulating materials - 0.8-2.5 kg/m²
Set to light foot traffic: 24 hours
Ready for use: 7 days
How to clean equipment: with water when the product is still wet. Mechanically when product has hardened
Waiting time for grouting: Approx. 24 hours
Storage:
24 months in original packaging. Avoid freezing temperatures
Packaging: 5 kg buckets

D1E EN 12004

ÉMISSIONS DANS L'AIR INTÉRIEUR* B

Litoacril LA201

White, ready-for-use, dispersion adhesive with extended open time, no vertical slip, for laying ceramic tiles on floors and walls indoors. Ideal for application on gypsum-based plaster with no need to apply a primer beforehand.

TECHNICAL FEATURES
Colour: White
Application: notched trowel
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Maximum application thickness: 3 mm
Consumption:
3.5 mm trowel: 1.5 kg/m²
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 3.5 kg/m²
Insulating materials - 0.8-2.5 kg/m²
Set to light foot traffic: 24 hours
Ready for use: 7 days
How to clean equipment: with water when the product is still wet. Mechanically when product has hardened
Waiting time for grouting: Approx. 24 hours
Storage:
24 months in original packaging. Avoid freezing temperatures.
Packaging: 5-10-25 kg buckets

D1TE EN 12004

ÉMISSIONS DANS L'AIR INTÉRIEUR* B

Litoacril LA315

Grey, ready-for-use, dispersion adhesive with no vertical slip and extended open time for laying ceramic tiles on floors and walls indoors. Ideal for application on gypsum-based plaster with no need to apply a primer beforehand.

TECHNICAL FEATURES
Colour: Grey
Application: notched trowel
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Maximum application thickness: 3 mm
Consumption:
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 3.5 kg/m²
Insulating materials - 0.8-2.5 kg/m²
Set to light foot traffic: 24 hours
How to clean equipment: with water when the product is still wet. Mechanically when product has hardened
Ready for use: 7 days
Waiting time for grouting: Approx. 24 hours
Storage:
24 months in original packaging. Avoid freezing temperatures
Packaging: 5-10-25 kg buckets

D1TE EN 12004

ÉMISSIONS DANS L'AIR INTÉRIEUR* B

Litoacril Plus

White, high-performance dispersion adhesive with no vertical slip and extended open time for laying ceramic tiles on floors and walls indoors. Ideal for application on gypsum-based plaster with no need to apply a primer beforehand.

TECHNICAL FEATURES
Colour: White
Application: notched trowel
Application temperatures allowed: From +5°C to +35°C
Open time (EN1346): ≥ 0,5 N/mm² after 30 minutes
Maximum application thickness: 3 mm
Consumption:
3.5 mm trowel: 1.5 kg/m²
6 mm trowel: 2.5 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 3.5 kg/m²
Insulating materials - 0.8-2.5 kg/m²
Set to light foot traffic: 24 hours
Ready for use: 7 days
How to clean equipment: with water when the product is still wet. Mechanically when product has hardened
Waiting time for grouting: Approx. 24 hours
Storage:
24 months in original packaging. Avoid freezing temperatures
Packaging: 5 kg buckets.

D2TE EN 12004

ÉMISSIONS DANS L'AIR INTÉRIEUR* C

Litoelastic EVO

High-performance, white, two-component reactive adhesive for laying floors and walls indoors and outdoors of any type of ceramic tile, including reinforced thin slabs, mosaics, natural and reconstituted stone even on non-traditional substrates, such as wood, metal and fibreglass. Suitable for installations over existing tiles, on heated floors and in swimming pools. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: Component A: white
Component B: clear straw-coloured
Mix ratio: Part A 92.6 parts by weight
Part B 7.4 parts by weight
Mixture life: About 1 hour at T=+23°C
Application temperatures allowed: From +10°C to +30°C
Open time (EN1346): ≥ 0,5 N/mm² after 50 minutes
Bonding time: Approx. 1 hour
Cleaning of equipment and residues: With water and Scotch-Brite™ pad on wet product. Once hardened, mechanical cleaning only
Consumption:
Mosaics and small formats:
2 mm trowel: 1.1 kg/m² - 3.5 mm trowel: 1.8 kg/m²
Normal formats with sides ≤ 60 cm:
8 mm trowel: 3 kg/m² - 10 mm trowel: 3.5 kg/m²
Large formats with sides > 60 cm:
Back-buttering 5 kg/m²
Set to light foot traffic: Approx. 24 hours at T=+23°C
Ready for use: 7 days
Waiting time for grouting: Approx. 24 hours
Storage:
24 months in original packaging. Avoid freezing temperatures
Packaging: 5-10 kg buckets.

R2T EN 12004

ZHERORISK EVOLUTION TECHNOLOGY

GEV-EMICODE EC1 PLUS very low emission

ÉMISSIONS DANS L'AIR INTÉRIEUR* A+

Litoelastic EVO FR

High-performance, two-component, flexible reactive adhesive for laying floors and walls indoors and outdoors of any type of ceramic tiles, including reinforced thin slabs, mosaics, natural and reconstituted stone even on non-traditional substrates such as wood, metal and fibreglass. Suitable for installations over existing tiles, on heated floors and in pools. Low flame-spread product compliant with Directive 2014/90/EU (MED) pursuant to IMO 2010 FTP Code for use on ships. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: Component A: white
Component B: clear straw-coloured
Mix ratio: Part A 92.6 parts by weight
Part B 7.4 parts by weight
Mixture life: About 1 hour at T=+23°C
Application temperatures allowed: From +10°C to +30°C
Open time (EN1346): ≥ 0,5 N/mm² after 50 minutes
Bonding time: Approx. 1 hour
Cleaning of equipment and residues: With water and Scotch-Brite™ pad on wet product. Once hardened, only mechanical cleaning.
Consumption: 2 mm trowel: 1.1 kg/m²
3.5 mm trowel: 1.8 kg/m²
8 mm trowel: 3 kg/m²
10 mm trowel: 3.5 kg/m²
Set to light foot traffic: Approx. 24 hours at T=+23°C
Ready for use: 7 days
Waiting time for grouting: Approx. 24 hours
Storage:
24 months in original packaging. Avoid freezing temperatures
Packaging: 5 kg buckets.

R2T EN 12004

ZHERORISK EVOLUTION TECHNOLOGY

0474

GEV-EMICODE EC1 PLUS very low emission

ÉMISSIONS DANS L'AIR INTÉRIEUR* A+

Classification of grouting for joints according to the EN 13888 standard

CEMENTITIOUS

TYPE	CLASS		
CG	1	-	-
	2	W	A

KEY	
CG1	normal cementitious grout
CG2	improved cementitious grout
W	reduced water absorption
A	high abrasion resistance

REACTIVE

TYPE	CLASS	
RG	-	

KEY		
RG	Reaction resin grout	Reactive grout

Key

- Target destinations
- Resistant to UV rays
- Stain-proof
- Joint width
- Suitable for use in swimming pools
- Suitable for contact with food
- Non-absorbent
- Resistant to contact with chemical agents
- Patented product
- Water-repellent
- Suitable for areas subject to heavy traffic

0474

The **certificate of compliance for marine equipment** has been granted for a kit consisting of EpoxyÉlite EVO FR grout, as well as Litoelastic EVO FR adhesive, according to Directive 2014/90/EU (2010 FTP Code). The certification concerns the determination of the **limited ability of surface materials and foundations for covering bridges to propagate a flame**, in addition to the calorific value. The kit satisfies the requirements of Part 5 of the FTP Code 2010 of the IMO (finishing materials for bulkhead and ceiling linings).

Starlike® EVO

Two-component acid-resistant epoxy grout for the laying and grouting of ceramic tiles and mosaic with joints between 1 and 15 mm width. Extremely easy to apply and clean. Suitable for direct contact with food substances. Product with ultra-low volatile organic compound (VOC) emissions. Patent Pending.

TECHNICAL FEATURES

Waiting time for grouting:
Floor application:
- with normal-setting adhesive: 24 hours
- with fast-setting adhesive: 6 hours
- with mortar: 7-10 days

Wall application:
- with normal-setting adhesive: 6-8 hours
- with fast-setting adhesive: 6 hours
- with mortar: 2-3 days

Mixing ratios:
Component A: 93.7 parts by weight
Component B: 6.3 parts by weight

The two components are pre-measured in their respective pac
Mix consistency: thixotropic creamy grout
Specific weight of mix: 1.55 kg/l
Mixture life: About 1 hour at T = +23°C
Application temperatures allowed: From +12°C to +30°C
Recommended application temperature: From +18°C to +2
Set to light foot traffic: 24 hours at T = +23°C
Ready for use: 5 days at T = +23°C
Joint width: From 1 to 15 mm
Storage:
24 months in original packaging, avoid freezing temperatures.
Packaging: 1-2.5-5 kg bucket

R2T EN 12004 · RG EN 13888 · 1-15 mm · WATERPROOF · UV RESISTANT · ZHERORISK EVOLUTION TECHNOLOGY · PATENTED

GEV-EMICODE EC1 PLUS very low emission · ÉMISSIONS DANS L'AIR INTÉRIEUR A+

Class COLD COLLECTION

- 100 Bianco Assoluto
- 102 Bianco Ghiaccio
- 105 Bianco Titanio
- 110 Grigio Perla
- 115 Grigio Seta
- 120 Grigio Piombo
- 125 Grigio Cemento
- 130 Grigio Ardesia
- 140 Nero Grafite
- 145 Nero Carbonio

Class WARM COLLECTION

- 200 Avorio
- 202 Naturale
- 205 Travertino
- 208 Sabbia
- 210 Greige
- 215 Tortora
- 225 Tabacco
- 230 Cacao
- 232 Cuoio
- 235 Caffè

Glam COLLECTION

- 300 Azzurro Pastello
- 310 Azzurro Polvere
- 320 Azzurro Caraibi
- 330 Blu Avio
- 340 Blu Denim
- 350 Blu Zaffiro
- 400 Verde Salvia
- 410 Verde Smeraldo
- 420 Verde Prato
- 430 Verde Pino
- 500 Rosa Cipria
- 530 Viola Ametista
- 550 Rosso Oriente
- 580 Rosso Mattone
- 600 Giallo Vaniglia

Metallic COLLECTION

- Platinum
- Shining Gold
- Copper
- Rusty
- Bronze

Starlike® EVO - Finishes

The Platinum, Shining Gold, Bronze, Copper and Rusty additives, if mixed as the third component with Starlike® EVO in the 113 Neutro colour, produce grouting with metallic effects. These additives are available separately, in pre-dosed containers for the 2.5 - 5 kg bucket of Starlike® EVO 113 Neutro.

The Galaxy, Spotlight, Gold and Night Vision additives, if mixed as the third component with Starlike® EVO, produce grouting with one-of-a-kind and exclusive effects. These additives are available separately, in pre-dosed containers for the 1 - 2.5 - 5 kg bucket of Starlike® EVO.

Metallic Collection

Starlike® EVO - 113 Neutro

+


Platinum


Shining Gold


Copper


Rusty


Platinum

Finishes

Starlike® EVO

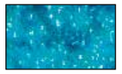
+


Galaxy


Spotlight


Gold


Night Vision



Starlike® Crystal EVO

Two-component, translucent epoxy grout for grouting transparent glass or artistic mosaics with joints up to 3 mm. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: 700 Crystal
Mix ratio:
Component A: 93.7 parts by weight
Component B: 6.3 parts by weight
The two components are pre-measured in their respective packaging
Mix consistency: creamy grout
Specific weight of mix: 1.55 kg/l

Mixture life: About 1 hour at T=+23°C
Temperatures for application:
Allowed: from +12°C to +30°C - Recommended: from +18°C to +23°C
Set to light foot traffic: 24 hours at T=+23°C
Ready for use: 5 days at T=+23°C
Joint width: Up to 3 mm
Storage:
24 months in original packaging, avoid freezing temperatures.
Packaging: 1-2.5-5 kg buckets

RG EN 13888 · 0-3 mm · WATERPROOF · UV RESISTANT · ZHERORISK EVOLUTION TECHNOLOGY · GEV-EMICODE EC1 PLUS very low emission · EMISSIONS DANS L'AIR INTÉRIEUR A+

Starlike® ColorCrystal EVO

Two-component, translucent, acid-resistant epoxy grout for grouting any type of glass mosaic with joints up to 3 mm width. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Mix ratio:
Component A: 93.7 parts by weight
Component B: 6.3 parts by weight
The two components are pre-measured in their respective packaging
Mix consistency: creamy grout
Specific weight of mix: 1.55 kg/l
Mixture life: About 1 hour at T=+23°C
Temperatures for application:

Allowed: from +12°C to +30°C - Recommended: from +18°C to +23°C
Set to light foot traffic: 24 hours at T=+23°C
Ready for use: 5 days at T=+23°C
Joint width: Up to 3 mm
Storage:
24 months in original packaging, avoid freezing temperatures.
Packaging: 2.5 kg buckets

RG EN 13888 · 0-3 mm · ZHERORISK EVOLUTION TECHNOLOGY · WATERPROOF · UV RESISTANT


800 Grigio Oslo · 810 Verde Capri · 820 Azzurro Taormina · 825 Beige Havana · 830 Rosa Kyoto

GEV-EMICODE EC1 PLUS very low emission · EMISSIONS DANS L'AIR INTÉRIEUR A+

STARLIKE® EVO - Consumption as adhesive 1.6 kg/m² (3.5x3.5 mm notched trowel)

STARLIKE® EVO - Consumption as grout

		kg / m²	mm						
			1.5	2	3	4	5	7	10
mm	10x10x4		1.40	1.86					
mm	10x10x10		4.65	6.20					
mm	15x15x4		0.8	1.7					
mm	15x15x10		2.1	4.1					
mm	15x30x8		1.2	2.5					
mm	20x20x3		0.70	0.93	1.40	1.86	2.33	3.26	4.65
mm	23x23x8		1.1	2.2	3.2	4.3	5.4	7.5	10.8
mm	25x25x10		1.2	2.5	3.7	5	6.2	8.7	12.4
mm	50x50x4		0.2	0.5	0.7	1	1.2	1.7	2.5
mm	50x50x10		0.6	1.2	1.9	2.5	3.1	4.3	6.2
mm	100x100x8		0.37	0.50	0.74	0.99	1.24	1.74	2.48
mm	125x240x12		0.34	0.45	0.68	0.91	1.13	1.58	2.26
mm	150x150x6		0.18	0.24	0.36	0.48	0.61	0.85	1.21
mm	150x150x8		0.25	0.33	0.50	0.66	0.83	1.16	1.65
mm	200x200x8		0.19	0.25	0.37	0.50	0.62	0.87	1.24
mm	250x330x8		0.13	0.17	0.26	0.35	0.44	0.61	0.87
mm	300x300x8		0.12	0.17	0.25	0.33	0.41	0.58	0.82
mm	300x600x10		0.12	0.16	0.23	0.31	0.39	0.54	0.78
mm	400x400x10		0.12	0.16	0.23	0.31	0.39	0.54	0.78
mm	450x450x10		0.10	0.14	0.21	0.27	0.34	0.48	0.68
mm	600x600x10		0.08	0.10	0.15	0.20	0.26	0.36	0.51

STARLIKE® CRYSTAL EVO / STARLIKE® COLORCRYSTAL EVO - Consumption as grout

		kg/m²	(mm)		
			1	2	3
mm	10x10x4		1.4		
mm	15x15x4			1.2	
mm	15x15x6			1.8	
mm	15x15x8			2.4	3.5
mm	15x15x10			2.7	
mm	20x20x4			1	
mm	20x20x8			2	3
mm	23x23x4			0.85	
mm	23x23x6			1.3	
mm	23x23x8			1.7	

Mosaici artistici Artistic mosaics Mosaïques artistiques Künstlerische Mosaiken Mosaicos artisticos	4 mm	kg/m²	0.9
	6 mm		1.35
	8 mm		1.8
	10 mm		2.25

Starlike® Decor

Liquid additive to add to Starlike® EVO to create decorative finishes for internal walls.

TECHNICAL FEATURES
Colour: Transparent
Viscosity (T=+25°C): 10-20 mPa.s
Density: 1.07 g/cm³
Storage: 24 months in the original packaging at temperatures between +5°C and +35°C. Avoid freezing temperatures.
Packaging: Pre-dosed tubs for the 2.5 kg bucket of Starlike® EVO

Decor Primer Fondo

Two-component epoxy primer suitable for levelling substrates before the application of Starlike® Decor.

TECHNICAL FEATURES
Colour: White
Appearance: component A white paste; component B: thick liquid
Application: smooth steel trowel
Mixture life: about 60 minutes at T= +23°C
Hardening time: about 24 hours at T= +23°C
Application temperatures allowed: from +5°C to +35°C

Consumption: about 1.25 kg/m² per mm of thickness
Storage: 24 months in original packaging. Avoid freezing temperatures.
Packaging: 5 kg bucket

StenDecor

Stencils specifically designed for decorating surfaces already covered with Starlike®Decor. The designs are created with Starlike® EVO in the grout version.

TECHNICAL FEATURES
With StenDecor stencils, you obtain raised and textured designs, which are inspired by the stucco technique used in the typical Italian interior decorating tradition.
The StenDecor sheets are made with two different special plastic materials which are resilient and resistant, washable in water and reusable over and over again whilst remaining perfectly flat.

Collections
StenDecor is available in six collections, each consisting of a border (size 42x15 cm) with three individual designs (21x15 cm) 1 mm thickness and three individual designs (21x15 cm) 0.20 mm thickness.

Subjects
Glasses, Pots and Fruit for the kitchen area, Shells and Leaves for the bathroom or living room; Hangers for the bedroom. The Animal collection for children's bedrooms, on the other hand, consists of 4 individual designs in two sizes (21x15 cm and 29.7x21 cm) only in 1 mm thickness.

Packaging: cardboard envelope (each envelope contains one collection)

EpoxyÉlite EVO

Two-component acid-resistant epoxy grout for the laying and grouting of ceramic tiles and mosaics with 1- to 15-mm wide joints, on indoor and outdoor floors and walls. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Waiting time for grouting:
Floor installation with standard setting adhesive: 24 hours
Floor installation with quick setting adhesive: 6 hours
Cladding installation with standard setting adhesive: 6-8 hours
Cladding installation with quick setting adhesive: 4 hours
Mixing ratios:
Component A: 93.7 parts by weight
Component B: 6.3 parts by weight
The two components are pre-measured in their respective packaging
Mix consistency: thixotropic creamy grout
Specific weight of mix: 1.6 kg/l
Mixture life: About 1 hour at T=+23°C

Application temperatures allowed: From +10°C to +30°C
Recommended application temperature: From +18°C to +23°C
Set to light foot traffic: 24 hours at T=+23°C
Ready for use: 5 days at T=+23°C
Joint width: From 1 to 15 mm
Storage:
24 months in original packaging. Avoid freezing temperatures.
Packaging: 5-10 kg buckets (A + B)

100 Bianco Assoluto · 110 Grigio Perla · 125 Grigio Cemento · 140 Nero Grafite
205 Travertino · 210 Greige · 225 Tabacco · 230 Cacao

EpoxyÉlite EVO FR

Two-component acid-resistant epoxy grout for the laying and grouting of ceramic tiles and mosaics with 1- to 15-mm wide joints, on indoor and outdoor floors and walls. Low flame-spread product compliant with Directive 2014/90/EU (MED) pursuant to IMO 2010 FTP Code for use on ships. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Waiting time for grouting:
Floor installation with standard setting adhesive: 24 hours
Floor installation with quick setting adhesive: 6 hours
Cladding installation with standard setting adhesive: 6-8 hours
Cladding installation with quick setting adhesive: 4 hours
Mixing ratios:
Component A: 93.7 parts by weight
Component B: 6.3 parts by weight
The two components are pre-measured in their respective packaging

Mix consistency: thixotropic creamy grout
Specific weight of mix: 1.6 kg/l
Mixture life: About 1 hour at T=+23°C
Application temperatures allowed: From +10°C to +30°C
Recommended application temperature: From +18°C to +23°C
Set to light foot traffic: 24 hours at T=+23°C
Ready for use: 5 days at T=+23°C
Joint width: From 1 to 15 mm
Storage:
24 months in original packaging. Avoid freezing temperatures.
Packaging: 5 kg buckets (A + B)

0474

COLOURS
100 Bianco Assoluto · 110 Grigio Perla

FillGood EVO

Water-based polyurethane single-component grout, ready for use, reusable, stain-proof, for compact and flexible joints with uniform and long-lasting colours. Exempt from hazard classification.

TECHNICAL FEATURES
Waiting time for grouting:
Floor application:
with normal-setting adhesive: 24 hours
with fast-setting adhesive: 6 hours
with mortar: 7-10 days
Wall application:
with normal-setting adhesive: 6-8 hours
with fast-setting adhesive: 4 hours
with mortar: 2-3 days
Application temperatures allowed: From +10°C to +30°C

Set to light foot traffic (T = +23°C): 24 hours
Ready for use: 7 days
Joint width: From 1 to 6 mm
How to clean equipment: Can be cleaned with water while s wet. Once hardened, only clean mechanically.
Storage:
24 months in the original unopened packaging at temperatures between +5°C and +35°C. Avoid freezing temperatures.
Packaging: 5 kg bucket

COLOURS
100 Bianco Assoluto · 110 Grigio Perla · 125 Grigio Cemento · 140 Nero Grafite · 205 Travertino · 210 Greige · 225 Tabacco · 230 Cacao

Litochrom 0-2

High performance cementitious grout for the grouting of joints up to 2mm wide between ceramic tiles, mosaics and natural stone. High resistance to abrasion and low water absorption. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES

Waiting time for grouting:
Floor installation with normal-setting adhesive: 24 hours
Floor installation with fast-setting adhesive: 6 hours
Floor application with mortar: 7-10 days
Cladding installation with normal-setting adhesive: 6-8 hours
Cladding installation with fast-setting adhesive: 4 hours
Wall application with mortar: 2-3 days
Mixing ratios:
Water or Idrostuk = 32% (1.6 l for 1 x 5 kg bag)
Mix curing time: 5 minutes
Mix consistency: thixotropic creamy grout
Specific weight of mix: 1.97 kg/l
Mixture life: Approx. 2 hours
Application temperatures allowed: From +5°C to +35°C
Waiting time for cleaning: From 5 to 20 minutes depending on absorption and temperature
Set to light foot traffic: 24 hours
Ready for use: 7 days
Joint width: Up to 2 mm
Consumption:
Mosaics 1x1x0.4 - 2-mm joints: 2.4 kg/m²
Tiles 5x5x0.4cm. - 2-mm joints: 0.5 kg/m²
Tiles 10x10x0.6cm. - 2-mm joints: 0.18-0.36 kg/m²
Tiles 15x15x0.6cm. - 2-mm joints: 0.12-0.24 kg/m²
Tiles 15x20x0.6cm. - 2-mm joints: 0.21 kg/m²
Tiles 25x25x1.2cm. - 2-mm joints: 0.29 kg/m²
Storage:
24 months in original packaging when stored in a dry place
Packaging:
5 kg plastic bags (boxes of 5 pcs)

CG2 WA EN 13888 — 0-2 mm

COLOURS

C.00 Bianco
C.30 Grigio Perla

GEV-EMICODE EC1 PLUS very low emission — EMISSIONS DANS L'AIR INTÉRIEUR A+

Litochrom 1-6

High performance cementitious grout for the grouting of joints from 1 to 6 mm wide between ceramic tiles, mosaics and natural stone. High resistance to abrasion and low water absorption. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES

Waiting time for grouting:
Floor installation with snormal-setting adhesive: 24 hours
Floor installation with fast-setting adhesive: 6 hours
Floor application with mortar: 7-10 days
Cladding installation with normal-setting adhesive: 6-8 hours
Cladding installation with fast-setting adhesive: 4 hours
Wall application with mortar: 2-3 days
Mixing ratios:
Water or Idrostuk = 28%
(1.4 litres for 1 x 5 kg bag)
(7 litres for 1 x 25 kg bag)
Mix curing time: 5 minutes
Mix consistency: thixotropic creamy grout
Specific weight of mix: 1.94 kg/l
Mixture life: Approx. 40 minutes
Application temperatures allowed: From +5°C to +35°C
Waiting time for cleaning: From 5 to 20 minutes depending on absorption and temperature
Set to light foot traffic: 24 hours
Ready for use: 7 days
Joint width: from 1 to 6 mm.
Consumption:
Mosaics 1x1x0.4 - 2-mm joints: 2.39 kg/m²
Tiles 5x5x0.4cm. - 2-mm joints: 0.48 kg/m²
Tiles 10x10x0.6cm. - 1-2-4-mm joints: 0.18-0.36-0.72 kg/m²
Tiles 15x15x0.6cm. - 1-2-4-mm joints: 0.12-0.24-0.48 kg/m²
Tiles 15x20x0.6cm. - 2-3-4-mm joints: 0.21-0.31-0.42 kg/m²
Tiles 25x25x1.2cm. - 2-3-4-mm joints: 0.29-0.43-0.57 kg/m²
Tiles 25x33x0.8cm. - 3-4-6-mm joints: 0.25-0.34-0.5 kg/m²
Tiles 33x33x1cm. - 3-4-6-mm joints: 0.27-0.36-0.54 kg/m²
Tiles 30x45x1cm. - 4-6-mm joints: 0.33-0.5 kg/m²
Tiles 45x45x1.2cm. - 4-6-mm joints: 0.32-0.48 kg/m²
Storage:
Colours Grey and Anthracite: 12 months (Dir.2003/53/EC-Italian Min. Dec. 10.05.04).
Other colours: 24 months in original packaging in a dry place.
Packaging:
5 kg plastic bags (boxes of 5 pcs)
25 kg bag

COLOURS

C.00 Bianco	C.20 Grigio Chiaro	C.30 Grigio Perla	C.700 Grigio Medio	C.10 Grigio	C.40 Antracite	C.160 Azzurro Cielo	C.170 Crocus	C.140 Rosa	C.150 Menta
C.50 Jasmine	C.60 Bahama Beige	C.680 Nocciola	C.80 Caramel	C.710 Mogano	C.200 Wengè	C.90 Terracotta	C.120 Marrone Chiaro	C.130 Sabbia	C.690 Off White

CG2 WA EN 13888 — 1-6 mm

GEV-EMICODE EC1 PLUS very low emission — EMISSIONS DANS L'AIR INTÉRIEUR A+

Litochrom 3-15

High performance cementitious grout for the grouting of joints from 3 to 15 mm wide between ceramic tiles, mosaics and natural stone. High resistance to abrasion and low water absorption. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES

Waiting time for grouting:
Floor installation with normal-setting adhesive: 24 hours
Floor installation with fast-setting adhesive: 6 hours
Floor application with mortar: 7-10 days
Cladding installation with normal-setting adhesive: 6-8 hours
Cladding installation with fast-setting adhesive: 4 hours
Wall application with mortar: 2-3 days
Mixing ratios:
Water or Idrostuck = 18-20%
(0.9 - 1 litre for 1 x 5 kg bag)
(4.5 - 5 litres for 1 x 25 kg bag)
Mix curing time: 5 minutes
Mix consistency: thixotropic creamy grout
Specific weight of mix: 2.02 kg/l
Mixture life: Approx. 2 hours
Application temperatures allowed: From +5°C to +35°C
Waiting time for cleaning: From 5 to 20 minutes depending on absorption and temperature
Set to light foot traffic: 24 hours
Ready for use: 7 days
Joint width: From 3 to 15 mm
Consumption:
Tiles 10x10x0.6cm. - 4-6-mm joints: 0.84-1.26 kg/m²
Tiles 15x15x0.6cm. - 4-6-mm joints: 0.56-0.84 kg/m²
Tiles 15x20x0.6cm. - 4-6-8-mm joints: 0.49-0.74-0.98 kg/m²
Tiles 25x25x1.2cm. - 4-6-8-mm joints: 0.67-1.01-1.35 kg/m²
Tiles 25x33x0.8cm. - 4-8-10-mm joints: 0.39-0.79-0.99 kg/m²
Tiles 33x33x1cm. - 4-8-10-mm joints: 0.42-0.85-1.06 kg/m²
Tiles 30x45x1cm. - 4-10-12-mm joints: 0.39-0.97-1.17 kg/m²
Tiles 45x45x1.2cm. - 4-10-12-mm joints: 0.37-0.93-1.12 kg/m²
Tiles 50x50x1.2cm. - 6-12-14-mm joints: 0.5-1.01-1.18 kg/m²
Tiles 60x60x1.2cm. - 6-12-14-mm joints: 0.42-0.84-0.98 kg/m²
Storage:
Colours Grey and Anthracite: 12 months (Dir.2003/53/EC-Italian Min. Dec. 10.05.04).
Other colours: 24 months in original packaging in a dry place.
Packaging:
5 kg plastic bags (boxes of 5 pcs)
25 kg bag

CG2 WA EN 13888 — 3-15 mm

COLOURS

C.30 Grigio Perla
C.10 Grigio
C.40 Antracite
C.60 Bahama Beige
C.80 Caramel

GEV-EMICODE EC1 PLUS very low emission — EMISSIONS DANS L'AIR INTÉRIEUR A+

Litocolor

Coloured treatment for cementitious joints. Litocolor is a ready-for-use polyurethane varnish, for waterproofing and water-oil repellent treatment of cementitious joints.

TECHNICAL FEATURES

Colours: all the colours of the Litochrom cementitious grout range 0-2, 1-6, 3-15 and any RAL and NCS shade on request.
Appearance: liquid
Application temperatures allowed: from +10°C to +25°C
Set to light foot traffic: 24 hours
Ready for use: 5 - 7 days
Drying time: 6 - 8 hours
Consumption: approximately 1 l for 50 - 60 m² of ceramic tiles measuring 25x25 cm
Storage: 12 months in original packaging in a well-ventilated and dry environment. Avoid freezing temperatures.
Packaging: 1 litre tub

Ottoseal S100 - S105

Single-component, neutral cross-linking silicone sealants. Excellent resistance to weathering, ageing and UV rays.

TECHNICAL FEATURES
Working temperature: from +5°C to +35°C.
Filming time at +23°C: about 10 minutes.
Hardening in 24 hours at T=+23°C: 2-3 mm.
Overall distortion allowed: 25%.
Heat resistance: from -40°C to +180°C.
Density at T=+23°C: about 1.0 g/cm³.
Indication of consumption: Dilatation joint about 5x5 mm ■ 12 linear metres per tube.
Corner joint 5x5 mm ◢ about 25 linear metres per tube.
Storage: 18 months in original packaging in cool, dry place.
Packaging: S105 tube 310 ml
S100 tube 300 ml

Ottoseal S70

Single-component, neutral cross-linking silicone sealant.

TECHNICAL FEATURES
Working temperature: from +5°C to +35°C.
Filming time at +23°C: about 5 minutes.
Hardening in 24 hours at T=+23°C: 3 mm.
Overall distortion allowed: 20%.
Heat resistance: from -40°C to +180°C.
Density at T=+23°C: about 1.0 g/cm³.
Indication of consumption: Dilatation joint about 5x5 mm ■ 12 linear metres per tube.
Corner joint 5x5 mm ◢ about 25 linear metres per tube.
Storage: 15 months in original packaging in cool, dry place.
Packaging: tube 310 ml

Ottoseal S73

Single-component, acetic cross-linking silicone sealant.

TECHNICAL FEATURES
Working temperature: from +5°C to +35°C.
Filming time at +23°C: about 10 minutes.
Hardening in 24 hours at T=+23°C: 2 mm.
Overall distortion allowed: 20%.
Heat resistance: from -40°C to +180°C.
Density at T=+23°C: about 1.02 g/cm³.
Indication of consumption: Dilatation joint about 5x5 mm ■ 12 linear metres per tube.
Corner joint 5x5 mm ◢ about 25 linear metres per tube.
Storage: 12 months in original packaging in cool, dry place.
Packaging: tube 310 ml

Ottoseal S34

Single-component, neutral cross-linking silicone sealant.

TECHNICAL FEATURES
Working temperature: from +5°C to +35°C.
Filming time at +23°C: about 10 minutes.
Hardening in 24 hours at T=+23°C: 2-3 mm.
Overall distortion allowed: 20%.
Heat resistance: from -40°C to +265°C.
Density at T=+23°C: about 1.16 g/cm³.
Indication of consumption: Dilatation joint about 5x5 mm ■ 12 linear metres per tube.
Corner joint 5x5 mm ◢ about 25 linear metres per tube.
Storage: 12 months in original packaging in cool, dry place.
Packaging: tube 310 ml

Ottocoll M500

Water-resistant adhesive sealant.

TECHNICAL FEATURES
Colour: White
Working temperature: from +5°C to +40°C.
Filming time at +23°C: about 20 minutes.
Hardening in 24 hours at T=+23°C: 2-3 mm.
Overall distortion allowed: 20%.
Heat resistance: from -40°C to +90°C.
Density at T=+23°C: about 1.4 g/cm³.
Storage: 12 months in original packaging in cool, dry place.
Packaging: tube 310 ml

Ottocoll M501

Hybrid transparent adhesive.

TECHNICAL FEATURES
Colour: Transparent
Working temperature: from +5°C to +40°C.
Filming time at +23°C: about 45 minutes.
Hardening in 24 hours at T=+23°C: 2-3 mm.
Overall distortion allowed: 20%.
Heat resistance: from -40°C to +90°C.
Density at T=+23°C: about 1.1 g/cm³.
Storage: 9 months in original packaging in cool, dry place.
Packaging: tube 310 ml

STARLIKE® EVO Class COLD COLLECTION

S105 C01	100 Bianco Assoluto
S105 C116	102 Bianco Ghiaccio
S105 C71	105 Bianco Titanio
S105 C43	110 Grigio Perla
S100 C1170	115 Grigio Seta
S105 C02	120 Grigio Piombo
S105 C1168	125 Grigio Cemento
S100 C808	130 Grigio Ardesia
S100 C5176	140 Nero Grafite
S105 C04	145 Nero Carbonio

Class WARM COLLECTION

S100 C51	200 Avorio
S105 C84	202 Naturale
S100 C103	205 Travertino
S100 C55	208 Sabbia
S105 C77	210 Greige
S105 C2044	215 Tortora
S100 C6778	225 Tabacco
S100 C6777	230 Cacao
S100 C6776	232 Cuoio
S100 C21	235 Caffè

Glam COLLECTION

S100 C753	300 Azzurro Pastello
S105 FN2674	310 Azzurro Polvere
S105 FN2682	320 Azzurro Caraibi
S105 FN2681	330 Blu Avio
S100 C25	340 Blu Denim
S105 FN2678	350 Blu Zaffiro
S100 C91	400 Verde Salvia
S105 FN2680	410 Verde Smeraldo
S105 FN2679	420 Verde Prato
S100 C6854	430 Verde Pino
S100 C74	500 Rosa Cipria
S105 FN2673	530 Viola Ametista
S100 C35	550 Rosso Oriente
S100 C2288	580 Rosso Mattone
S105 FN2672	600 Giallo Vaniglia

STARLIKE® EVO METALLIC COLLECTION

S100 C14	Platinum
S100 C19	Shining Gold
S100 C15	Bronze
S105 C05	Copper
S100 C2288	Rusty

STARLIKE® EVO CRYSTAL EVO

S105 C00	Crystal

Litochrom 0-2 - Litochrom 1-6 - Litochrom 3-15

S105 C01	Bianco C00	S105 C08	Jasmine C50
S105 C387	Grigio Chiaro C20	S100 C55	Bahama Beige C60
S105 C86	Grigio Perla C30	S105 C10	Nocciola C680
S100 C1170	Grigio Medio C700	S100 C82	Caramel C80
S105 C02	Grigio C10	S100 C1167	Mogano C710
S105 C67	Antracite C40	S100 C07	Wengé C200
S100 C0334	Azzurro C160	S100 C572	Terracotta C90
S100 C92	Crocus C170	S100 C15	Marrone Chiaro C120
S100 C23	Rosa C140	S100 C22	Sabbia C130
S100 C40	Menta C150	S100 C69	Off White C690

OTTOSEAL S70

C00	C137	C6112	C34
C01	C67	C6117	C32
C38	C04	C6115	C41
C787	C08	C1282	C109
C230	C84	C6111	C110
C80	C1110	C6113	C111
C1108	C82	C6116	C44
C71	C10	C1300	C47
C45	C26	C6114	C1390
C43	C05		C1391
C18	C37		C4720
C56	C990		
C1109	C197		

OTTOSEAL S34

C18
C89
C67

OTTOCOL M500

C01

OTTOCOL M501

C00

Otto Primer 1216

Single-component silicone resin solution.

TECHNICAL FEATURES
Consumption: about 30-50 g/m²
Density at T=+23°C: about 0.76 g/cm³.
Storage: 12 months in original packaging in a well-ventilated and dry environment.
Packaging: bottle 100 ml

Otto Primer 1105

Single-component synthetic resin solution.

TECHNICAL FEATURES
Consumption: about 30-50 g/m²
Density at T=+23°C: about 0.73 g/cm³.
Storage: 12 months in original packaging in a well-ventilated and dry environment.
Packaging: bottle 100 ml

Otto Primer 1218

Solvent-based, single-component synthetic resin solution based on the silicone-acrylic copolymer in solvents.

TECHNICAL FEATURES
Consumption: about 80-200 g/m² depending on absorption.
Density at T=+23°C: about 0.95 g/cm³.
Storage: 12 months in original packaging in a well-ventilated and dry environment.
Packaging: bottle 100 ml

Otto Cleanprimer 1101

Solvent-based solution with single component adhesive-inducing additives.

TECHNICAL FEATURES
Consumption: about 100-300 g/m² depending on absorption.
Density at T=+23°C: about 0.94 g/cm³.
Storage: 12 months in original packaging in a well-ventilated and dry environment.
Packaging: bottle 100 ml

Otto Primer 1217

Silicone primer for plastic materials.

TECHNICAL FEATURES
Consumption: about 10-20 g/m²
Density at T=+23°C: about 0.8 g/cm³.
Storage: 12 months in original packaging in a well-ventilated and dry environment.
Packaging: bottle 100 ml

Otto Cleaner T

Mixture of solvents. High cleaning and degreasing efficiency, dries quickly without leaving any residue.

TECHNICAL FEATURES
Storage: 5 years in original packaging in cool, dry place at temperatures between +5°C and +35°C.
Packaging: bottle 100 ml

Smoothing agent X-GL

Aqueous solution of surface-active substances.

TECHNICAL FEATURES
Storage: 12 months in original packaging in cool, dry place at temperatures between +5°C and +35°C.
Packaging: bottle 250 ml

Smoothing agent X-GLM

Aqueous solution of surface-active substances.

TECHNICAL FEATURES
Storage: 12 months in original packaging in cool, dry place at temperatures between +5°C and +35°C.
Packaging: bottle 250 ml

Otto Fugenfux

Smoothing tools.

TECHNICAL FEATURES
Packaging: bag of 3 pcs.

Choice of silicone sealants and Otto-Chemie complementary products

	TARGET DESTINATION	Cleaner - Otto Cleaner T	Primer: Otto Primer 1216*	Primer: Otto Primer 1105 (for absorbent substrates)	Primer: Otto Cleanprimer 1101 (for acrylic bathtubs)	Primer: Otto Primer 1218	Grouts: Ottoseal S100/S105	Grouts: Ottoseal S70	Grouts: Ottoseal S34	Grouts: Ottoseal S73	Smoothing agent: X-GLM	Smoothing agent: X-GL
Indoor areas	Flexible expansion joints between ceramic tiles in residential indoor floors and covering.	•					•	•			•	•
Indoor areas	Flexible expansion joints between natural stone in residential indoor floors and covering.	•	•					•			•	
Indoor areas	Flexible expansion joints between ceramic tiles and natural stone in commercial floors with average traffic.	•	•					•			•	
Indoor areas	Flexible expansion joints between ceramic tiles in indoor industrial floors with heavy traffic.	•	•						•		•	•
Indoor areas	Flexible expansion joints in concrete substrate in indoor industrial floors with heavy traffic.	•		•					•			•
Wet areas	Sealing of ceramic tiles, glass mosaics and fittings in bathrooms and shower cubicles.	•			•		•	•			•	•
Wet areas	Sealing of natural stone and fittings in bathrooms and showers cubicles.	•	•					•			•	
Wet areas	Sealing of ceramic tiles and natural stones at tanks, swimming pools and Spa facilities also containing seawater.	•				•		•			•	
Wet areas	Sealing of ceramic tiles and glass mosaics in steam baths and hammam baths.	•	•							•		•
Wet areas	Sealing of natural stone in steam baths and hammam baths.	•	•							•	•	
Outdoor areas	Flexible expansion joints between ceramic tiles and natural stones on balconies, terraces and walkways on façades.	•	•					•			•	
Outdoor areas	Flexible expansion joints between ceramic tiles on façades.	•	•				•	•			•	•
Outdoor areas	Flexible expansion joints between natural stones on façades.	•	•					•			•	

*Although Otto Primer 1216 is suitable for most natural stones, there are particular types of stone materials for which it is necessary to carry out preventive tests in order to verify its absolute compatibility.
Consult our technical department for an appropriate choice.

Guide to the choice of products for surface treatments

SURFACES	Litostone Protector	Litogres Protector	Litocare Matt	Litocare Stone Glossy	Litowax Gres & Natural Stone	Litogrip Floor	Litoseal Terrazze
Marble (all finishes excluding polished finishes) Clay Terracotta	•		•	•	•		•
Granite (all finishes except for polished finishes)	•		•	•	•	•	•
Polished marble	•		•				•
Polished granite	•		•			•	•
Natural stone: sandstone quartz limestone slate lava stones	•		•	•	•		•
Reconstituted marble	•		•				
Reconstituted quartz	•	•	•			•	
Porcelain stoneware Structured porcelain stoneware Natural clinker		•	•		•	•	•
Polished porcelain stoneware		•	•			•	•
Lapped porcelain stoneware		•	•				•
Enamelled ceramic Enamelled clinker		•	•			•	•
Glass mosaics		•	•				•
Ceramic mosaics		•	•			•	•
• Cementitious grouting	•	•	•				•
• Epoxy grouting		•	•				

Litoclean

Descaling acid detergent in powder form to clean cement, adhesive and cementitious grout residue from ceramic tiled floors and walls.

TECHNICAL FEATURES
Application temperatures allowed: From +5°C to +40°C
Surface treatment time: Approx. 5 minutes
Consumption: 1 kg every 6 - 10 m²
Storage: 24 months in original packaging in a dry place.
Packaging:
5 kg bucket - boxes of 4 pcs
1 kg bucket - boxes of 24 pcs

Litoclean EVO

Liquid acid descaler cleaner for cleaning ceramic covering. Efficiently removes cementitious grout residue and efflorescence.

TECHNICAL FEATURES
Colour: Pale yellow
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: Approx. 5 - 10 minutes
Consumption: 5 - 20 m²/l
Storage:
24-36 months in original packaging in a cool and dry place. Avoid freezing temperatures
Packaging:
1 litre bottle - Boxes of 12 pcs / 5 litre canisters - Boxes of 4 pcs

ZHERORISK® EVOLUTION TECHNOLOGY

Litonet EVO

Liquid detergents for the removal of epoxy grout stains and residue from all types of ceramic tiles, mosaics and natural stone

TECHNICAL FEATURES
Colour: Colourless
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: Approx. 5 - 10 minutes
Consumption: 10 - 15 m²/l
Storage:
24 months in original packaging away from sources of heat and direct sunlight. Avoid freezing temperatures
Packaging: 1 litre bottles - 12 pc boxes and 5 litre canisters

ZHERORISK® EVOLUTION TECHNOLOGY

Litonet Gel EVO

Liquid detergents for the removal of epoxy grout stains and residue from all types of ceramic tiles, mosaics and natural stone. Specifically for wall applications.

TECHNICAL FEATURES
Colour: Colourless
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: Approx. 5 - 10 minutes
Consumption: 10 - 15 m²/l
Storage:
24 months in original packaging away from sources of heat and direct sunlight. Avoid freezing temperatures
Packaging: 0.750 litre spray bottles in boxes of 12

ZHERORISK® EVOLUTION TECHNOLOGY

FillCleaner EVO

FillGood EVO, single-component, ready-to use, high-viscosity, eco-friendly liquid detergent for removing traces of water-based polyurethane grouting.

TECHNICAL FEATURES
Application temperatures allowed: From +5°C to +30°C
Waiting time for cleaning: After at least 24 hours from grouting with FillGood EVO
Maximum contact time on grouting: No more than 5-7minutes
Storage: 24 months in original packaging in a cool, dry environment. Avoid freezing temperatures.
Packaging: Bottles with spray nozzle 0.75 litres. Boxes of 12 pcs.

ZHERORISK® EVOLUTION TECHNOLOGY

Litonet Pro

High viscosity liquid detergent for the removal of stains and consolidated epoxy grout residue from all types of ceramic tiles and mosaics.

TECHNICAL FEATURES
Colour: White
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: Approx. 15 - 30 minutes
Consumption: About 2 - 3 m² / 0.5 l
Storage:
24 months in original packaging away from sources of heat and direct sunlight. Avoid freezing temperatures.
Packaging: 0.5 litre bottles - 12 pc boxes

Litostrip

Cleaning gel for the removal of epoxy mortar residues. Litostrip is a product designed for the total removal of hardened epoxy resin based on Starlike® EVO o EpoxyElite EVO grout in joints or marks left on ceramic surfaces due to incorrect or insufficient cleaning.

TECHNICAL FEATURES
Colours: transparent
Appearance: Gel
Inflammability: yes
Waiting time for removal: marks 10 - 20 minutes - hardened grouting 1 - 8 hours
Application temperatures allowed: from +5°C to +35°C
Consumption: on average about 0.1 - 0.3 l/m²
Storage: 24 months in original packaging in a cool, dry place
Packaging: 0.750 l metal bottle

Litoseal Terrazze

Single-component, anti-infiltration, water-resistant, protective primer for terraces

TECHNICAL FEATURES
Colour: Colourless
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: Approx. 5 minutes
Consumption: 10 -15 m²/l
Storage: 36 months in original packaging away from sources of heat in a well-ventilated and dry environment.
Packaging: 1 litre metal bottles

Litocare Matt

Protection with matt colour-enhancing effect to intensify the tone of ceramic or natural stone surfaces and for epoxy and cementitious grouting

TECHNICAL FEATURES
Colour: Colourless
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: Approx. 10 minutes
Consumption: 15 -20 m²/l
Storage: 24 months in original packaging away from sources of heat in a well-ventilated and dry environment.
Packaging: 1 litre metal bottles

Litogres Protector

Stain-proof, water- and oil-repellent solvent-based, low-odour primer for ceramics and porcelain stoneware tiles

TECHNICAL FEATURES
Colour: Colourless
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: Approx. 10 minutes
Consumption: 25 -30 m²/l
Storage: 36 months in original packaging away from sources of heat in a well-ventilated and dry environment.
Packaging: 1 litre metal bottles

Litostone Protector

Stain-proof, water- and oil-repellent, solvent-based primer for marble and granite

TECHNICAL FEATURES
Colour: Colourless
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: Approx. 10 minutes
Consumption: 25 -20 m²/l
Storage: 36 months in original packaging away from sources of heat in a well-ventilated and dry environment.
Packaging: 1 litre metal bottles

Litocare Stone Glossy

Glossy-effect stain-proof, solvent-based primer

TECHNICAL FEATURES
Colour: Colourless
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: Approx. 5 - 10 minutes
Consumption: 15 -20 m²/l
Storage: 24 months in original packaging away from sources of heat in a well-ventilated and dry environment.
Packaging: 1 litre metal bottles

Litowax Gres & Natural Stone

Satin-effect, water-based protective polymer

TECHNICAL FEATURES
Colour: Off-white
Application temperatures allowed: From +5°C to +35°C
Consumption: 10 -15 m²/l
Storage: 36 months in original packaging in a well-ventilated and dry environment.
Packaging: 1 litre plastic bottles

Litogrip Floor

Non-slip treatment for siliceous materials

TECHNICAL FEATURES
Colour: Amber
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: About 15 to 60 minutes
Consumption: 15 -20 m²/l
Storage: 24 months in original packaging in a well-ventilated and dry environment.
Packaging: 1 litre plastic bottles

Litostain Cleaner

Stain remover for coloured stains

TECHNICAL FEATURES
Colour: Colourless
Application temperatures allowed: From +5°C to +35°C
Surface treatment time: From 10 to 20 minutes, up to a few hours
Consumption: Dependent on the size of the stain
Storage: 12 months in original packaging in a well-ventilated and dry environment.
Packaging: 0.5 litre plastic bottles

Litoshine EVO

Eco-compatible, neutral liquid cleaner for all surfaces.
No rinsing needed.

TECHNICAL FEATURES
Colour: Colourless
Application temperatures allowed: From +5°C to +35°C
Consumption: 1-2 caps in 5 litres of water for less absorbent surfaces or 2-3 caps for natural stone and terracotta.
Storage: 36 months in original packaging in a well-ventilated and dry environment.
Packaging: 1 litre plastic bottles

ZHEROSK® EVOLUTION TECHNOLOGY

Classification of waterproofing products according to the EN 14891 standard

Classification of liquid-applied waterproofing products to use beneath ceramic tiling bonded with adhesives according to the Standard UNI EN 14891.

Liquid-applied waterproofing products are classified into three types:
CM normal cementitious liquid-applied waterproofing products
DM normal dispersion liquid-applied waterproofing products
RM normal reactive liquid-applied waterproofing products

It is possible to have multiple classes for each type, related to the various optional features, such classes are designated by the following abbreviations:
O1 with improved crack-bridging ability at low temperatures (-5°C);
O2 with improved crack-bridging ability at very low temperatures (-20°C);
P resistant to contact with chlorinated water (for example for use in swimming pools).

The product is designated with the symbol of the type (CM, DM or RM), followed by of the class or classes to which it belongs.

Coverflex

Two-component cementitious mortar with the option for roller, brush or trowel application, elastic up to -20°C and chlorine resistant, for the under-tile waterproofing of wet indoor and outdoor environments such as bathrooms, balconies, terraces and pools. Compliant with class CM02P pursuant to EN 14891.

TECHNICAL FEATURES
Colour of the mix: Light grey
Mixing ratios:
Component A (powder): 2 parts (1 x 20 kg bag)
Component B (liquid): 1 part (1 x 10 kg canister)
Mix curing time: 5 minutes
Mix consistency: smooth fluid grout
Mixture life: Approx. 1 hour
Application temperatures allowed: From +5°C to +35°C
Thickness: Not less than 2 mm in two subsequent coats
Maximum application thickness: 2 mm per coat
Application: Roller, brush or smooth steel trowel

Cleaning:
The equipment and the surface of ceramic tiles must be cleaned from product residue with water before the product hardens.
Consumption: 1.6 kg/m² per 1 mm of thickness
Waiting time between 1st and 2nd layer:
Approx. 3-4 hours at T=+23°C
Waiting time for laying ceramic tiles:
5 days. 24 hours in good weather
Storage:
12 months in original packaging in a dry place at temperatures not below +5°C. Component B (liquid) should be subjected to freezing temperatures.
Packaging: 20 kg bag + 10 kg canister

CM 02P EN 14891

ÉMISSIONS DANS L'AIR INTÉRIEUR* A A+ A B C

Elastocem

Two-component cementitious mortar applied with a trowel, elastic up to -20°C and chlorine resistant, for the under-tile waterproofing of wet indoor and outdoor environments such as bathrooms, balconies, terraces and pools. Compliant with class CM02P pursuant to EN 14891.

TECHNICAL FEATURES
Colour of the mix: Dark grey
Mixing ratios:
Component A (powder): 3 parts (1 x 24 kg bag)
Component B (liquid): 1 part (1 x 8 kg canister)
Mix curing time: 5 minutes
Mix consistency: fluid grout
Mixture life: Approx. 1 hour
Application temperatures allowed: From +5°C to +35°C
Thickness: Not less than 2 mm in two subsequent coats
Maximum application thickness: 2 mm per coat
Application: Smooth steel trowel

Cleaning: The equipment and the surface of ceramic tiles must be cleaned from product residue with water before the product hardens.
Consumption: 1.7 kg/m² per 1 mm of thickness
Waiting time between 1st and 2nd layer:
Approx. 3-4 hours at T=+23°C
Waiting time for laying ceramic tiles:
5 days. 24 hours in good weather
Storage:
12 months in original packaging in a dry place at temperatures not below +5°C. Component B (liquid) should be subjected to freezing temperatures.
Packaging: 24 kg bag + 8 kg canister

CM 02P EN 14891

ÉMISSIONS DANS L'AIR INTÉRIEUR* A+ A+ A B C

Osmogrout

Cementitious mortar with osmotic action for waterproofing, with direct or indirect load on walls and cement-based structures indoors and outdoors.

TECHNICAL FEATURES
Colour: Grey
Mixing ratios:
Water = 26% (6.5 litres of water per 25 kg bag)
Mix curing time: 5 minutes
Mix consistency:
Fluid grout for trowel/brush application
Apparent volumetric mass of the wet grout:
1800 kg/m³
Mixture life: Approx. 1 hour
Application temperatures allowed: From +5°C to +35°C
Applicable thicknesses:
Minimum = 1.5 mm - Maximum per coat = 2 mm
Maximum in two coats = 4 mm

Application: Smooth steel trowel, brush.
Waiting time for application of second coat:
After 5-6 hours and no more than 24 hours
Ready for use: 7 days
Temperature of use: From -30°C to +70°C
How to clean equipment:
With water when product is fresh. Mechanically when product has hardened.
Consumption: 1.6 kg/m² per 1 mm of thickness
Storage:
12 months in original packaging in a dry place.
Packaging: 25 kg bag

COMPLIANCE WITH UNI EN 1504-3
COATING (C)
PI-MC
RC-IR
PROTECTION SYSTEMS FOR CONCRETE SUBSTRATES
LITOKOL

Hidroflex

Ready-to-use liquid membrane with the option for roller, brush or trowel application, elastic up to -5°C, for the under-tile waterproofing of wet indoor environments compliant with standard ETAG 022 and class DM01 pursuant to EN 14891. Product with ultra-low volatile organic compound (VOC) emissions.

TECHNICAL FEATURES
Colour: Green
Application temperatures allowed: From +5°C to +35°C
Total thickness to be applied in two successive coats:
1 mm
Drying time at T=+23°C:
1st coat: 2 hours - 2nd coat: 16 hours
Application: Roller, brush or smooth steel trowel
Cleaning:
The equipment must be cleaned from product residue with water before the product hardens. Once dried, only mechanically.

Consumption: 1.15 kg/m² per coat
Waiting time for laying ceramic tiles:
At least 16 hours from applying the second coat.
Storage:
24 months in original packaging stored in a cool, dry place.
Avoid freezing temperatures.
Packaging:
5 kg plastic bucket - Standard pallet 720 kg.
10 kg plastic bucket - Standard pallet 480 kg.
20 kg plastic bucket - Standard pallet 480 kg.

DM 01 EN 14891

vytten tjäna vårtrum · approved according to ETAG 022 · FFV Fogrödet för vårtrum · GEV-EMICODE EC1 PLUS very low emission · ÉMISSIONS DANS L'AIR INTÉRIEUR* A+ A+ A B C

Aquamaster

Ready-to-use liquid membrane with the option for roller, brush or trowel application, elastic up to -5°C and chlorine resistant, for the under tile waterproofing of wet indoor and outdoor environments such as bathrooms, balconies, terraces and pools, compliant with standard ETAG 022 and class DM01P pursuant to EN 14891.

TECHNICAL FEATURES
Colour: Grey
Application temperatures allowed: From +5°C to +35°C
Total thickness to be applied in two/three successive coats: 0.8 - 1 mm
Consumption: 1,6 - 2,3 kg/m²
Drying time at T=+23°C:
1st coat: (diluted 10% with water): 30 minutes
Successive coats: 4 hours between coats
Application: Roller, brush or smooth steel trowel
Cleaning: The equipment must be cleaned from product residue with water before the product hardens. Once dried, only mechanically.
Waiting time for laying ceramic tiles:
At least 24 hours from applying the final coat.
Storage:
24 months in original packaging stored in a cool, dry place.
Avoid freezing temperatures.
Packaging:
10 kg buckets - Standard pallet 640 kg.
20 kg buckets - Standard pallet 600 kg.

DM 01P EN 14891

GEV-EMICODE EC1 PLUS very low emission · ÉMISSIONS DANS L'AIR INTÉRIEUR* A+ A+ A B C · approved according to ETAG 022 · CONSTRUCTION PRODUCT CERTIFICATE eurofins

Primer F

Waterproofing primer in aqueous dispersion. Internal use.

TECHNICAL FEATURES
Colour: Yellow
Application temperatures allowed: From +5°C to +35°C
Application: Roller or brush
Drying time: Approx. 20 minutes at T=+23°C
Consumption: 300 g/m² in two overlapping coats
Storage: 24 months in original packaging in a dry place.
Avoid freezing temperatures

Packaging:
10 kg canisters Standard pallet 600 kg
5 kg canisters Standard pallet 600 kg
2 kg canisters Standard pallet 500 kg

ÉMISSIONS DANS L'AIR INTÉRIEUR* A A+ A B C

> Liquid applied waterproof coating kit for interiors

Primer SK

Waterproofing primer in aqueous dispersion for wet indoor areas with ultra-low volatile organic compounds (VOC).

TECHNICAL FEATURES
Colour: Pink
Application temperatures allowed: from +10°C to +30°C
Drying time at T=+23°C:
1st coat: 30 minutes - 2nd coat: 1 hour
Consumption: 300 g/m² for two coats
Storage:
12 months in original packaging in a well-ventilated and dry environment. Avoid freezing temperatures.
Packaging: 4 kg plastic buckets

Litoband Sk Tape

Polypropylene fabric sealing tape with thermoplastic elastomer waterproof lining.

TECHNICAL FEATURES
Colour: Grey
Height: 120 mm.
Total thickness: 0.7 mm.
Weight: 43 g/m
Roll length: 10 - 50 m.
Resistance to water pressure:
>1.5 bar (DIN EN 1928-version B)
Longitudinal elongation at break: 70% (DIN 527-3)
Lateral elongation at break: 335% (DIN 527-3)
Packaging: 1 roll per box

Litoband Sk Net

Micro-perforated reinforcing strip. The product is part of the kit for waterproofing indoor wet areas certified according to ETAG 022, including the Aquamaster membrane.

TECHNICAL FEATURES
Colour: White
Height: 100 mm
Total thickness: 0.25 mm.
Weight: 6.6 g/m
Roll length: 10 m.
Longitudinal load at break (DIN 527-3): 200 N / 50 mm
Lateral load at break (DIN 527-3): 100 N / 50 mm
Longitudinal extension (DIN 527-3): 22.0%
Lateral extension (DIN 527-3): 90.0%
Resistance to UV rays (DIN EN ISO 4892-2): <500 h

> Kit for waterproof coating with flexible sheets

Litoproof Plus

Rolls of membrane for waterproofing under tiles in indoor wet areas.

TECHNICAL FEATURES
Colour: Grey
Roll width: 100 cm.
Roll length: 10 - 30 metres
Thickness: 0.41 mm
Working temperature:
From -5°C to +90°C
Packaging: 10 and 30 rolls.

Litoband Tape

Waterproofing tape in polyester fabric with butyl lining.

TECHNICAL FEATURES
Colour: Grey
Height: 120 mm
Butyl height: 70 mm
Total thickness: 0.8 mm.
Weight: 30 g/m
Roll length: 10m - 50 m.
Resistance to water pressure:
>1.5 bar (DIN EN 1928-version B)
Packaging: 1 roll per box

Litoband Sk Corners IC - Corners EC

Inner corner - external corner

TECHNICAL FEATURES
Colour: Grey
Height: 120 mm.
Butyl height: 70 mm.
Total thickness: 0.7 mm.
Resistance to water pressure:
>1.5 bar (DIN EN 1928-version B)
Longitudinal elongation at break: 73% (DIN 527-3)
Lateral elongation at break: 242% (DIN 527-3)
Packaging: 25 pieces per box

Litoband Sk Pipe Collar

Sk 8 - Pipe collar 120 x 120 mm - ø 8 mm. For pipes with ø 15-20 mm.
Sk 35 - Pipe collar 250 x 250 mm - ø 35 mm. For pipes with ø 45-60 mm.
Sk 65 - Pipe collar 250 x 250 mm - ø 65 mm. For pipes with ø 75-125 mm

TECHNICAL FEATURES
Colour: White
Total dimensions: Sk 8 - 120x120 mm.
Sk 35/Sk 65 - 250x250 mm.
Diameter flexible area: Sk 8 - 25 mm.
Sk 35 - 65 mm. Sk 65 - 130 mm.
Hole diameter: Sk 8 - 8 mm.
Sk 35 - 35 mm. Sk 65 - 65 mm.
For pipes with diameter: Sk 8 - 15-20 mm.
Sk 35 - 45-60 mm. Sk 65 - 75-125 mm.
Total thickness: 0.60 mm.
Water pressure resistance:
>1.5 bar (DIN EN 1928-version B)
Elongation at break (fabric): 100% (DIN 527-3)
Elongation at break (flexible area): 600% (DIN 527-3)
Packaging: 25 pieces per box

Litoband Sk Self-Adhesive Drain Collar

Self-adhesive gasket in butyl rubber for drains (370 x 370 mm)

TECHNICAL FEATURES
Colour: Grey
Sizes: 370x370 mm.
Total thickness:
1.3 mm (without adhesive film protection)
Weight: 217 g
Roll length: 10 - 50 m.
Packaging: 10 pieces per box

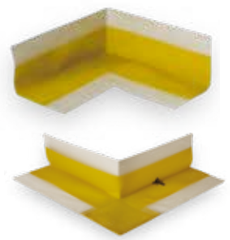
Litoband Basic

Waterproofing tape in polyester fabric with butyl lining

TECHNICAL FEATURES
Total width: 120 mm.
Width of waterproof area: 70 mm.
Weight: 555 g/m²
Thickness: 0.6 mm.
Tensile strength: ≥ 3,0 MPa
Tear resistance: ≥ 0,5 MPa
Elongation at break: ≥ 80 MPa
Elongation at maximum stress: ≥ 75 MPa
Maximum pressure: 2.0 bar
Shore hardness: 60
Packaging: Rolls of 10 and 50 linear metres

Litoband Basic Ai - Ae

Inner corner - external corner



TECHNICAL FEATURES
Total width: 120 mm.
Width of waterproof area: 70 mm.
Weight: 555 g/m²
Length of corners: 150 mm.
Thickness: 0.6 mm.
Tensile strength: ≥ 3,0 MPa
Tear resistance: ≥ 0,5 MPa
Elongation at break: ≥ 80 MPa
Elongation at maximum stress: ≥ 75 MPa
Maximum pressure: 2.0 bar
Shore hardness: 60
Packaging: Rolls of 10 and 50 linear metres

> Kit for waterproof coating with flexible sheets outdoors

Litoproof Extreme

Rolls of membrane for waterproofing under tiles on balconies and terraces.

TECHNICAL FEATURES
Colour: White
Roll width: 100 cm.
Roll length: 10 - 30 metres
Thickness: 0.50 ± 0.1 mm.
Application temperatures allowed:
From +5°C to +30°C

Working temperature: From – 30°C to +90°C
Storage:
24 months in original packaging in a cool, dry place away from light
Packaging: Rolls of 10 and 30 m² (roll width = 1 m.)

Litoband S.A.T.

Sealing tape in self-adhesive butyl (Roll height = 100 mm - Roles of 20 linear metres).

TECHNICAL FEATURES
Colour: Grey
Roll width: 10 cm.
Thickness (without liner): 0.64 ± 0.12 mm
Weight (without liner): 730 ± 35 g/m²
Roll length: 20 linear metres
Application temperatures allowed:
From +5°C to +30°C

Working temperature: From – 30°C to +80°C
Storage:
24 months in original packaging in a cool, dry place away from light
Packaging:
Rolls of 20 linear metres (roll height = 10 cm)

Litoband S.A.T. IC - EC

Internal corner - external corner in self-adhesive butyl

TECHNICAL FEATURES
Colour: Grey
Roll width: 10 cm.
Thickness (without liner): 0.64 ± 0.12 mm
Weight (without liner): 730 ± 35 g/m²
Roll length: 20 linear metres
Application temperatures allowed:
From +5°C to +30°C

Working temperature: From – 30°C to +80°C
Storage:
24 months in original packaging in a cool, dry place away from light
Packaging:
Rolls of 20 linear metres (roll height = 10 cm)

Litoband P

Drain gasket

TECHNICAL FEATURES
Colour: Grey
Sizes: 425x425 mm.
Packaging: 10 strips per box.

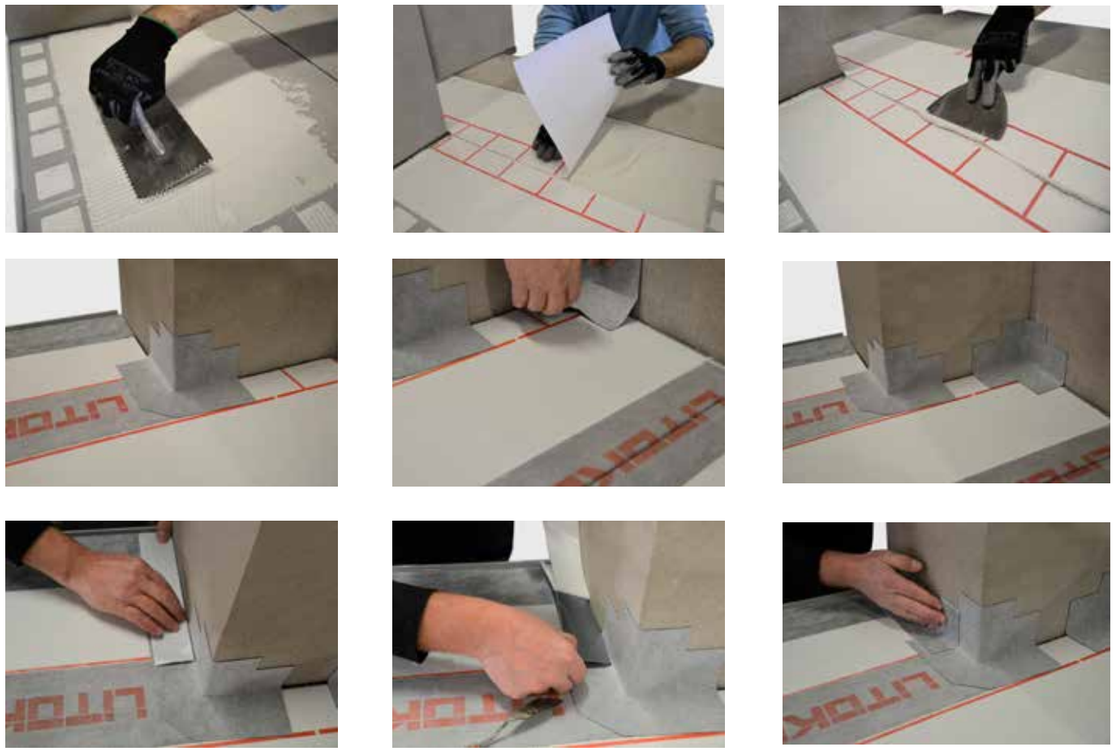
Fibreglass mesh

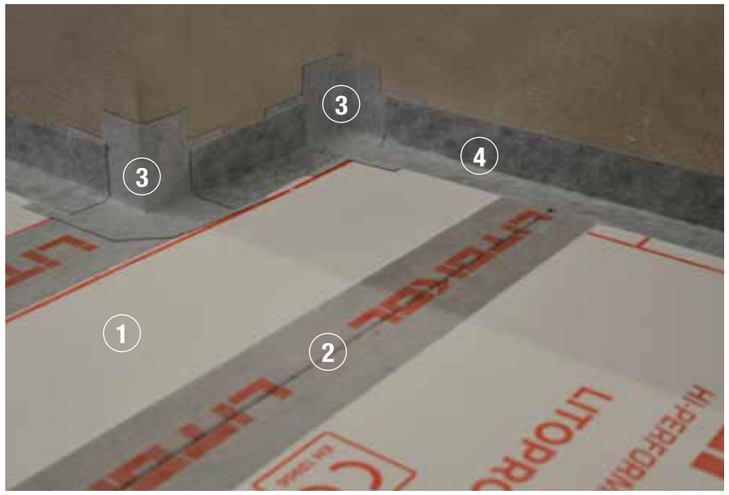
Anti-alkaline fibreglass mesh for reinforcement.

TECHNICAL FEATURES
Colour: White
Mesh dimensions: 4x5 mm.
Roll dimensions: Length = 50 m – Height = 1 m

Alkaline resistance: excellent
Storage: Unlimited
Packaging: Rolls of 50 m²
Standard pallet 3000 m²

Litoproof Extreme waterproofing system
Rolls of membrane for waterproofing under tiles on balconies and terraces





1 - LITOPROOF EXTREME
2 - LITOBAND SK TAPE
3 - LITOBAND S.A.T. IC-EC
4 - LITOBAND S.A.T.

Idrokol X20

Synthetic resin-based latex in aqueous dispersion adhesion additive for adhesives and cementitious mortars.

TECHNICAL FEATURES
Colour: White
Appearance: Liquid
Solid residue: 47-50%
Viscosity: 10-30 mPa s
Consumption: According to use
Storage:
24 months in original packaging. Avoid freezing temperatures.

Packaging:
2 kg canisters Standard pallet 500 kg
5 kg canisters Standard pallet 600 kg
10 kg canisters Standard pallet 600 kg
20 kg canisters Standard pallet 720 kg

Latexkol

Elasticising synthetic latex for cementitious adhesives. The use of the additive gives a high degree of deformability to the adhesive and improves its performance making it suitable for demanding applications.

TECHNICAL FEATURES
Appearance: Liquid
Colour: White
Solid residue: 34-36%
Viscosity: 20-30 mPa s
pH: 7-8
Application temperatures: from +5°C to +35°C
Working temperatures: from -30°C to +90°C
Consumption: see consumption of cementitious adhesives
Storage: 24 months in original packaging. Avoid freezing temperatures.

Packaging:
20 kg canisters - Standard pallet 720 kg
10 kg canisters - Standard pallet 600 kg
5 kg canisters - Standard pallet 600 kg

Idrostuk

Liquid additive in aqueous dispersion for the Litochrom range of cementitious grouts. Improves the adhesion to the sides of the tiles, reduces surface absorption of grouting.

TECHNICAL FEATURES
Appearance: Liquid
Colour: White
Solid residue: 10-12%
Viscosity: 10-30 mPa s
pH: 10-12
Application temperatures: from +5°C to +35°C
Mixture life: about 2 hours
Set to light foot traffic: 24 hours
Consumption: see grout consumption
Storage: 24 months in original packaging. Avoid freezing temperatures.

Packaging:
20 kg canisters Standard pallet 720 kg
10 kg canisters Standard pallet 600 kg
5 kg canisters Standard pallet 600 kg
2 kg canisters Standard pallet 500 kg

Concrete Primer

Ready-for-use primer in aqueous dispersion, non-yellowing, solvent free, for anti-dust treatment of indoor and outdoor cement substrates, such as basements, garages and warehouses. The product is characterised by excellent resistance to abrasion, water, oil and fuel. Suitable for sealing hairline cracks.

TECHNICAL FEATURES
Colour: White
Application temperatures allowed:
From +10°C to +30°C
Waiting time between first and second coat:
Approx. 2 hours at T=+23°C
Set to light foot traffic:
24 hours after application of second coat
Application: Short pile roller

Consumption: 5-8 m²/litre in two coats
Cleaning the equipment: With water when product is fresh.
Storage:
24 months in original packaging. Avoid freezing temperatures.
Packaging:
5 kg cans
Standard pallet 600 kg

Primer X94

Insulating primer in aqueous dispersion for gypsum-based substrates. Internal use.

TECHNICAL FEATURES
Colour: Greenish
Application: Roller or brush
Application temperatures allowed:
From +5°C to +35°C
Drying time: Approx. 2 hours at T=+23°C
Consumption:
100-200 g/m² depending on the absorption and porosity of the substrate.

Storage:
24 months in original packaging. Avoid freezing temperatures.
Packaging:
20 kg canisters Standard pallet 720 kg
10 kg canisters Standard pallet 600 kg
5 kg canisters Standard pallet 600 kg
2 kg canisters Standard pallet 500 kg

Primer C

Consolidating and insulating primer in aqueous dispersion for cementitious and gypsum-based substrates. Indoor use on floors and walls.

TECHNICAL FEATURES
Colour: White
Application: Roller or brush
Application temperatures allowed:
From +10°C to +35°C
Drying time: Approx. 4 hours at T=+23°C
Penetration: High
Consumption:
100-300 g/m² depending on the porosity of the substrate

Storage:
24 months in original packaging. Avoid freezing temperatures.
Packaging:
10 kg canisters Standard pallet 600 kg
5 kg canisters Standard pallet 600 kg
2 kg canisters Standard pallet 500 kg

Prepara Fondo EVO

Universal adhesion promoter for adhesives, self-levelling, smooth and cementitious plaster on smooth and non-absorbent surfaces. For indoors and outdoors

TECHNICAL FEATURES
Colour: Grey
Specific weight: 1.24 ± 0.05 g/cm³
Application:
Brush, long pile roller
Environmental conditions allowed for application:
Temperature: from +5°C to +35°C
Relative Humidity: from 10% to 70%
Drying time (T= +23°C – R.H. 60%):
About 3-4 hours if applied using a brush or roller

Consumption:
0,3 kg/m² applied with brush or roller
Storage:
12 months in original packaging when stored in a cool place, protected against freezing temperatures.
Packaging: 10 kg bucket

Hydrolux EVO (A + B)

Two-component clear finish (TOP COAT). Available in two versions: MATT or SATIN

TECHNICAL FEATURES
Colour: Clear, matt or satin
Mix ratio (A + B):
1 kg + 0.2 kg
Specific weight: 1.05 ± 0.05 g/cm³
Application time (T = +23°C):
1 hour
Application:
Short pile or velvet roller
Environmental conditions allowed for application:
Temperature: from +5°C to +35°C
Relative Humidity: from 10% to 60%

Hardening time (T= +23°C – R.H. 60%):
Superficial to the touch: 10 minutes
For subsequent applications: 5-6 hours
Opening to traffic: 24 hours
Total achievement of mechanical/chemical resistances: 72 hours
Consumption: 0.13 kg/m² in two coats
Storage:
12 months in original packaging in a dry place protected against freezing temperatures.
Packaging:
Part A: 1 kg bottle – Part B: 0.2 kg jar

Litostick X35

Hot melt glue sticks for ceramic samples.

TECHNICAL FEATURES
Colour: Yellow
Stick diameter: 12 mm
Stick length: 120 mm
Specific weight: 0.930
Melting point: 180-190°C
Open time: 30 seconds
Storage:
Unlimited in original packaging in a dry place
Packaging:
Box of 500 sticks.
5 kg cardboard box = Standard pallet 600 kg

Litogap

Closed-cell expanded polyethylene cord for expansion joints.

TECHNICAL FEATURES
Colour: Grey
Density ISO 845: 31 kg/m³
Longitudinal elongation at break
ISO 1926: 69%
Longitudinal tensile strength
ISO 1926: 201 Kpa
Working temperature: From -40°C to +80°C
Water absorption: None
Packaging:
Ø 6 mm – 2500 m boxes
Ø 10 mm – 1150 m boxes
Ø 15 mm – 550 m boxes
Ø 20 mm – 350 m boxes
Ø 25 mm – 200 m boxes
Ø 30 mm – 160 m boxes

Litoside

Expanded polyethylene self-adhesive strip for perimeter separation joints for cementitious screeds.
(5x100 mm)

TECHNICAL FEATURES
Colour: Grey
Density ISO 845: 20 kg/m³
Deformation at break (ASTM 0638M): 81.3%
Stress at break (ASTM 0638M): 2.3 kg/cm²
Water absorption (ASTM C272): 0.42%
Water vapour permeability (ASTM E96):
7.95 g/m²/24h
Working temperature: From -80°C to +90°C
Packaging: 10 m roll x 2 pcs.

Litolevel

Tile levelling spacers.

LITOLEVEL guarantees simple and fast tile laying, eliminating slippage between tiles, thus ensuring perfectly levelled floors and coverings.

LITOLEVEL is recommended for the laying of large porcelain stoneware, ceramic and natural stone tiles, as well as thin porcelain stoneware or agglomerate stone slabs (thickness 3/6 mm).

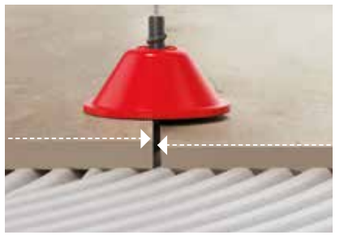
The system is composed of 3 elements: base, cone and nut.

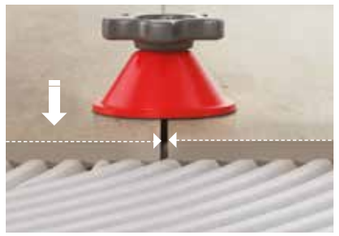
It does not require the use of pliers or tools of any type.

NUT
The nut is made of rigid plastic and has been designed for easy insertion into the base. The nut is reusable and can be used hundreds of times.

CONE
The cone is practical and easy to insert. It is made of rigid plastic, allowing efficient tile levelling. The nut is reusable and can be used hundreds of times.

BASE
The bases are designed to level tiles with thickness from 3 mm to 12 mm, creating narrow joints measuring 1.50 mm.
Wider joints are possible through the combined use of LITOLEVEL and cross or “T” tile spacers in the preferred size and in any case greater than 1.50 mm.



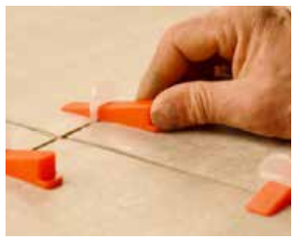


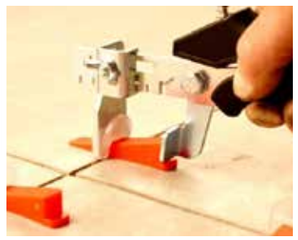
Levelling spacers

LEVELLING SPACERS FOR FLAT LAYING
Bucket: 100 wedges, 100 bases, 1 clamp

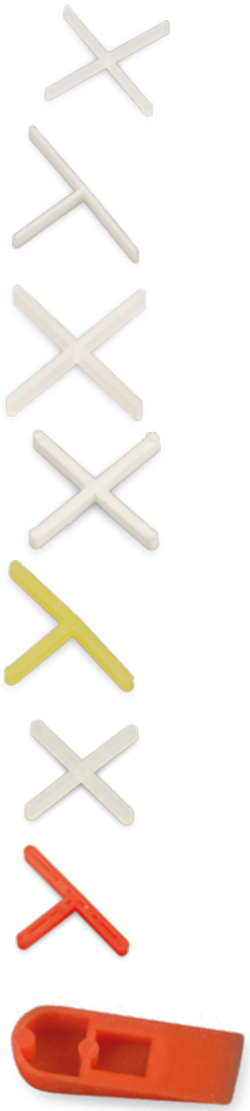
FASTENING WEDGE
Box of 24 bags x 100 pcs

BASE
Box of 8 bags x 500 pcs





Spacers



1 mm SPACER + 25 bags x 1000 pcs

1 mm T SPACER + 25 bags x 1000 pcs

1.5 mm SPACER + 30 bags x 1000 pcs

2 mm SPACER + 25 bags x 1000 pcs

2 mm T SPACER + 25 bags x 1000 pcs

3 mm SPACER + 25 bags x 1000 pcs

3 mm T SPACER + 15 bags x 1000 pcs

MIXED SPACING WEDGES 20 bags x 1000 pcs

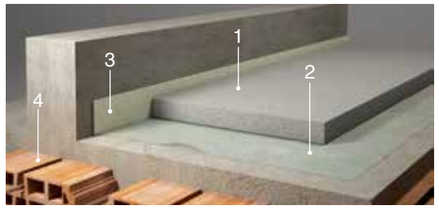
A guide to using Litokol products

Substrate preparation

Screeds for ceramic tiling can be classified in:
Unbonded screeds;
Bonded screeds;
Floating screeds;
Screeds with underfloor heating/cooling.
The requirements for screeds are essentially based on the intended installation area and refer to the resistance class under the EN 13813 standard.

Unbonded screeds with thickness ≥ 40 mm

Isolate the substrate by inserting sheets of polyethylene or similar, overlapping them by at least 20 cm. Place strips of compressible material along the walls and in line with any elevations (columns, stairs, etc.) to act as a perimeter joint and then, lay the polyethylene sheets up the entire thickness of the screed. The sheets act as a separating layer and barrier against any rising damp.



1 - screed
2 - polythene sheet;
3 - perimeter joint
4 - weight-bearing structure (floor)

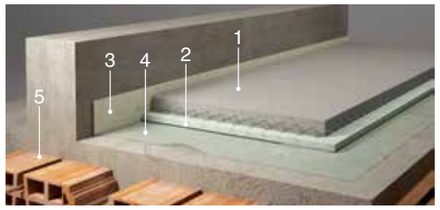
Bonding screed with thickness < 40 mm

In this case, the old support, consisting of a concrete substrate, ceramic tiles or natural stone, must be cleaned, free from dust, oil, wax, loose fragments or anything else that could prevent proper adhesion. It must also have good compression resistance. Place the strips of compressible material along the walls and in line with any floor elevations, to act as the perimeter joint. Just before applying the mixture on the substrate, use a brush or trowel to apply a liquid cement slurry, consisting of 3 parts cement, 1 part Idrokol X20 and 1 part water to obtain high adhesion of the screed with reduced thickness. Spread the Litocem-based mixture on the cement slurry that has not yet dried (wet on wet).

1 - screed
2 - adhesive cement slurry
3 - perimeter joint
4 - weight-bearing structure (floor)

Floating screeds

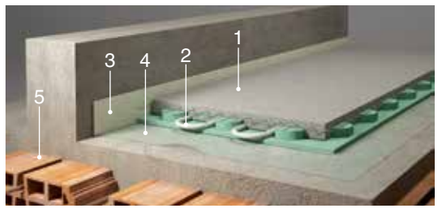
Floating screeds are unbonded screeds, installed on a layer, which acts as acoustic and thermal insulation. Because the insulation materials used are compressible, floating screeds must be suitably sized and, if necessary, reinforced with electro-welded mesh or other systems, to prevent puncturing and to facilitate the distribution of loads. Floating screeds require the installation of a perimeter joint.



1 - screed with electro-welded mesh
2 - layer of thermo-acoustic insulation
3 - perimeter joint
4 - polythene sheet
5 - weight-bearing structure (floor)

Screeds with underfloor heating/cooling

Screeds with heating/cooling systems are floating screeds which have heating/cooling systems embedded in them. As well as the requirements for floating screeds, the screed must have a thickness ≥ 30 mm over the system heating/cooling element. Before laying the tiles, the system must undergo a test run in accordance with UNI EN 1264-4.



1 - screed with electro-welded mesh
2 - layer of thermo-acoustic insulation
3 - perimeter joint
4 - polythene sheet
5 - weight-bearing structure (floor)

Preparation of the mixture to lay Litocem screeds

To lay floating or bonded screeds, both internal and external, Litokol suggests using the Litocem/Litocem Pronto hydraulic binders. The mixture can be prepared with a cement mixer, a horizontal auger mixer or with an automatic pressure pump like Turbosol. We do not recommend manual mixing using a shovel because the mixture will not be uniform. Mix thoroughly for at least 5-10 minutes. The water must be measured carefully to obtain a mixture with a "wet, almost plastic, earth" consistency which, in the compacting and tamping phase, must not create surface water.

Application

The mixture is cast like regular cementitious screed on the substrate, by first preparing levelling strips, compacting and tamping it to obtain a good closed surface finish, smooth and without any surface water. In the case of sudden variations in thickness, due to the presence of pipes, ducts, etc., a hexagonal perforated metal mesh must be inserted in the screed to reinforce it and to limit the formation of cracks. The screed must be at leas 2 cm thick over the pipes. If the installation work is not interrupted by a joint, the screed must be cut perpendicular to the laying surface and steel dowels with a diameter of 3-6 mm, 20-30 cm long must be inserted between them and spaced 20-30 cm apart in order to increase the adhesion of the concrete casting, thus avoiding problems of cracks and unevenness. On compressible substrates (e.g. thermo-acoustic insulation panels), the screed must be reinforced with electro-welded steel mesh.

Substrate preparation

Litokol self-levelling, fast and ultra-fast drying cementitious mortars
Litokol offers a complete range of self-levelling, premixed powder mortars made of fast-setting and drying special hydraulic binders, siliceous and calcareous aggregates of selected particle size and organic additives. Litokol self-levelling mortars develop high resistance to compression and flexing just after 4 hours of application and its fast drying speed means that ceramic tiles, natural stone, textile and resilient floor materials can be laid on top very soon afterwards.

Litokol fast and ultra-fast cementitious levelling layer mortars
Litokol cementitious levelling layers in premixed powder, made of fast-setting and drying hydraulic binders, siliceous aggregates of selected particle size and organic additives feature the following requisites:

- When mixed with water, they produce a thixotropic mixture that can be easily applied on vertical substrates without dripping. By increasing the water in the mixture, you obtain a plastic mortar of a consistency suitable for floor applications.
- Development of high mechanical resistance to flexing and compression just 4 hours after application.

Substrate preparation
The substrates must be clean, dry, solid, compact, suitably cured, without any loose fragments or rising damp.
Substrates that are too porous and absorbent or superficially powdery, must be treated with PRIMER C.
Smooth and compact substrates such as smoothed concrete, old ceramic or marble tiles, must be treated with the adhesion promoter primer Prepara Fondo EVO.
Sulphate/anhydrite screeds must be sanded down before and treated with Primer C or Primer X94. In this case check with a carbide hygrometer that the **maximum moisture content does not exceed 0.5%.**

Preliminary checks
Worksite conditions
Check that the conditions of temperature, humidity, lighting, etc. at the time of product application are adequate.
Use and storage of the material
Check that the product is suitable for the intended use by consulting the relevant technical data sheet and is properly stored.
Expansion joints
Check that the perimeter, expansion, fractionation and structural elastic joints have been correctly designed and prepared. Generally, fractionation joints must be created for areas of 50 m² or 25/30 m² in the case of heated floors. For rooms with surfaces of less than 50 m², insert expansion joints in line with thresholds.

Application
In the case of **self-levelling cementitious mortars,** the mixture is poured directly on the substrate and spread manually or with a machine with the aid of a squeegee or smooth metal trowel.
In the case of **a cementitious levelling layer,** the mixture is applied directly onto the substrate using a metal trowel to achieve the desired thickness.

For a smoother surface finish, use a sponge trowel when the product starts binding and has sufficiently hardened. A smoothing coat can be applied, if necessary, about 3 hours after the first coat.

Compatible waterproofing membranes
Waterproofing can be done 24 hours after application and before the laying of ceramic material using conventional two-component waterproofing cementitious membranes, such as Elastocem or Coverflex (CM) or in aqueous dispersion, such as of Hidroflex or Aquamaster (DM).

Compatible cementitious adhesives for laying
24 hours after application, it is possible to lay ceramic tiles, natural stone, parquet, textile and resilient floor materials. For laying ceramic tiles and natural stone, cementitious adhesives can be used with class C2 normal setting, class C2F quick hardening or R2 class reactive compounds depending on the size of the tiles, intended use or the type of natural stone.

Certifications
Self-levelling mortars and Litokol cementitious levelling layers are products with very low emissions of volatile organic compounds EC1 PLUS GEV-EMICODE and Class A+ (Émession dans l'air intérieur - according to French Regulations). Self-levelling mortars and Litokol cementitious levelling layers are CT classified according to EN 13813 where CT indicates that the product is cement based, while classes C and F denote the mechanical resistance to compression and bending after 28 days expressed in N/mm². The product conforms to EN 13813 regulations, indicated on the Performance Declaration, as per the European Construction Products Regulation (CPR No. 305/2011/EU) and tested according to certification system 4. **The declarations of performance (DoP) are available on www.litokol.it.**

Cementitious adhesives

The choice of the type of adhesive (classified according to the UNI EN 12004) must be done according to the following project data:
Target environment;
Type of substrate;
Type of ceramic tile;
Format of the ceramic tile.
In the period when the tiles will be laid, it is important to check the environmental conditions. In general, laying ceramic tiles cannot be done when the temperature is below +5°C or above +35°C, nor done outside in the case of adverse weather conditions (rain, snow, wind).

Regulations for Construction Products. Declaration of Performance DoP
The products conform to product harmonized standards and shown on the **Declaration of Performance (DoP)** as determined by the Regulations on **construction products (CPR - Construction Products Regulation N: 305/2011/EU)**. The declarations of performance (DoP) are available on www.litokol.it.

Design of ceramic tiling according to the UNI 11493 standard
The only way to guarantee the long-lasting performance of ceramic installations is to properly plan the process. Therefore, we recommend consulting the national standards in force in each country, such as UNI 11493 standards for Italy, which provides the necessary information concerning choice of materials and correct design, use and installation, in order to ensure the achievement of the required levels of quality, performance and durability.
Some of the general precautions that need to be followed are listed below as an example.

Substrates
Before installation, check that substrates are clean, free of loose fragments, properly dried and cured, flat and level, and that mechanical resistance requirements based on the intended use have been met.

Worksite conditions
At the time of application, check that temperature, humidity, light, etc. are adequate.

Materials
Check that all materials used for tiling (ceramic materials, levelling systems, adhesives, grouts, waterproofing products, etc.) are suitable for the intended use and have been correctly stored.

Expansion joints
Check that the perimeter, expansion, fractionation and structural elastic joints have been correctly designed and prepared. Fractionation joints are normally needed for 20/25 m² indoor sections, and 9-15 m² outdoor sections. For exteriors, make sure joints are properly waterproofed and sealed.
Back-buttering
For exterior installations, pools, large tiles, floors with intense or heavy traffic, thin slabs, vibrating supports and situations exposed to high temperature fluctuations, the adhesive mortar must be applied to both the substrate and the back of the tiles so as to obtain a full layer of adhesive without any air pockets.

Joints
In any type of ceramic tiling, suitably sized joints must be created based on the following parameters:
• Type, format and size tolerance of tiles
• Thermal expansion coefficients of the tiling materials being used

• Mechanical properties of installation materials
• Location and path of joints
• Mechanical characteristics of the substrate
• Environment of use and expected operating conditions
Butt joints are not allowed. Any plastic spacers must be removed before grouting.

Preparation of the mix
Pour the right quantity of water into a clean container and slowly add the powder, stirring with an electric drill fitted with a mixing paddle until obtaining a smooth and consistent mix without any lumps.
Leave the mix to settle for about 5 minutes and then briefly mix again for a few seconds.

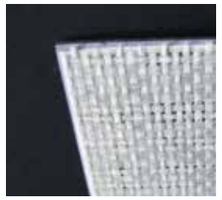
Adhesive application, laying the tiles and grouting
Spread the mix onto the substrate using the smooth part of the trowel to create a layer approximately 1 mm thick. Immediately afterwards, comb the product onto the surface using the notched part of the trowel. The notches of the trowel must be chosen based on the format of the tiles to be laid.
In any case, consider that 65-70% of the reverse side of tiles need **wetting for indoor installations, and 100% for outdoor installations** or floors subject to intense traffic. In outdoor installations or areas subject to high stress, it is recommended to also apply the adhesive to the back of the tiles **(back-buttering method).**
The tiles must be laid on the adhesive and firmly pressed to ensure good contact. In very warm or windy climates, or in the case of particularly absorbent substrates, the open time of the product may be drastically reduced to just a few minutes. **It is, therefore, recommended to regularly check that the adhesive has not skinned over.** In this case, the surface of the adhesive will need to be combed again using the notched trowel.
The tiles must be laid creating joints of a suitable width. Take any expansion, perimeter, control or structural joints into account.

If laid outdoors, the tiled surface must be protected for at least 24 hours against any water infiltration, and for approximately 5-7 days against any frost and direct sunlight.
Joints between the tiles can be grouted after approximately 6-8 hours in the case of wall tiles and after 24 hours in the case of floor tiles. Litochrom 0-2, Litochrom 1-6 and Litochrom 3-15 cementitious grouts can be used for grouting. FillGood EVO, the ready-for-use polymeric grout, can be used for indoor walls and floors and outdoor walls. For acid-resistant floors, we recommend using two-component epoxy grouts Epoxy Élite EVO or Starlike®EVO.

Laying thin slabs in porcelain stoneware

The UNI 11493 standard in force in Italy which provides the indications required to choose materials, the correct design, use and installation of ceramic tiles defines thin format tiles/slabs as being no more than 5.5 mm thick.
Thin slabs of reinforced layers of polymeric mesh, mats, etc. may present possible critical factors related to their behaviour in contact with adhesives and materials on which the application is planned. Such guidelines can be extended to mosaics fitted to mesh.
Litokol can support its customers in choosing the best solutions by consulting our technical support office.

Natural slab
with 3 mm thickness



Slab with reinforced back
with 3.5 mm thickness

Laying on façades

Laying and grouting of thin slabs

Certain guidelines are valid for all slab formats and every kind of application (flooring, wall, indoor, outdoor).

1. The adhesive must always be used with the back-buttering technique when it is applied both to the substrate and the back of the slabs with a notched trowel, to achieve thorough wetting and prevent the formation of voids.
2. The slabs must be laid with joints of at least 2-3 mm in width to interrupt surface continuity in order to reduce the elastic modulus and, therefore, its rigidity. The elastic modulus of materials for joints is, in fact, significantly inferior to that of the slabs. Conveying greater elasticity to the tiled surface prevents dangerous stresses due to expansion caused by temperature changes, hygrometric shrinkage or settling of the structures that could lead to the detachment of the slabs.
3. The creation of elastic fractionation joints and the compliance of any structural joints is mandatory in the case of surfaces greater than 25 m². Likewise, perimeter joints are required in correspondence with walls or other elevations, such as columns, steps, etc., on smaller surfaces also.

Choice of adhesive for laying thin slabs

The choice of the adhesive is determined by several factors listed below and will be reported in the following synopsis tables for additional clarity. The factors that determine the choice of the adhesive are:
- Slab format;
- Type of slab: “natural” slabs without reinforcement or “reinforced” with a glass mat on the back;
- Type of substrate;
- Indoor or outdoor areas;
- Flooring or walls;
- Requirements of rapid application of the ceramic tiling;

Thin slabs, thanks to the possibility of being produced in large formats, meet the requirements of architects and designers who choose this kind of material in order to obtain continuous surfaces, thereby minimising the grout joints. Nevertheless, a number of precautions must be taken by the installers when laying large formats and these are provided below.

- **Handling**

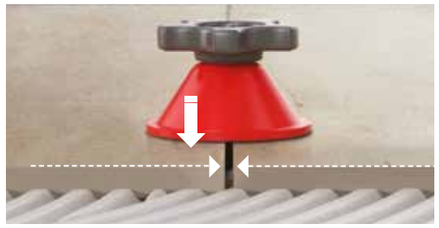
Firstly, utmost attention must be paid when handling these slabs by following the instructions provided by the manufacturers.
- **Back-buttering**

As mentioned, thin slabs must always be laid with the back-buttering technique, therefore, you should choose adhesives with an extended open time (E) to prevent the film on the surface from forming too quickly or, in any case, before laying the slabs. This precaution is more important in warm weather, for slabs measuring over 3600 cm² or when installed on an outdoor façade, where it is likely to be exposed to more ventilation.

- **Flatness**

One of the main difficulties encountered in laying large format thin slabs is keeping them flat. Often, “steps” are formed at the corners because the substrates are not perfectly flat or because the slabs are flexible. Tiler installers may find it helpful to use Litokol spacers for laying flat large formats (art. 170/K) as they ensure the slabs remain correctly positioned until complete hardening of the adhesive.
- **Grouting**

Grouting of the joints can be done using both cementitious grouts and two-component epoxy mortar or FillGood EVO ready-to-use polymer mortar. If you use a cement-based product, Litokol suggests Litochrom 1-6. If you choose to create a more resistant grouting, completely non-absorbing and with high surface cleanability, Litokol recommends the use of Starlike® EVO epoxy mortar, suitable for grouting joints of a width between 1 and 15 mm.



Adhesives in dispersion

An adhesive in dispersion is a mix of organic binders in the form of polymeric resins in aqueous dispersion, organic additives and inert fillers. The mix is a ready-to-use product and does not require any preparation.
Adhesives in dispersion are designated as type D.

Application

Apply the product with a notched trowel directly on the substrate. Since the products are in aqueous dispersion which do not contain cement, the drying and subsequent hardening occur by water evaporation.
Check, therefore, that the substrate and tile are sufficiently absorbent to allows the adhesive to dry.

The tiles are laid on the adhesive and firmly pressed to ensure good contact. The open time in normal temperature and humidity conditions varies from 20 to 30 minutes depending on the products. Very hot or windy climates or very absorbent substrates can reduce the time significantly to a few minutes. It is, therefore, recommended to frequently check that the adhesive has not formed a surface film.

Installation with butt joints (juxtaposed tiles) is not recommended. During installation, it is necessary to work around expansion or splitting joints, if any. Leave a 5 mm space in between tiles and walls, or any surface elevation. The tiled surfaces are ready for use after about 7-10 days depending on the absorption of the substrate and the environmental conditions.

Glueing of insulation panels with dispersion adhesives

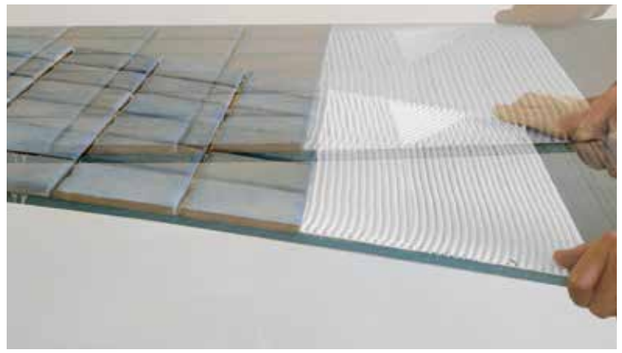
In addition to glueing all types of ceramic tiles on interior floors and walls, dispersion adhesives are also suitable for glueing in interior walls and ceiling panels in polystyrene and expanded polyurethane, glass wool, rock wool, sound-absorbing panels on absorbent substrates.
The adhesive can applied using a notched trowel all over the surface, or can be applied just in a few points, observing the open time of the product. In any case, the quantity of adhesive applied should be sufficient to ensure the panels are securely bonded.
The slabs will then be put in laid by pressing firmly to ensure they adhere correctly.

Reactive adhesives

A reactive adhesive is a mixture of synthetic epoxy and polyurethane resins, inert fillers and organic additives, in which hardening occurs by chemical reaction induced by a catalyst. These adhesives are available with one or two components.
Reactive adhesives are designated as type D.

Application

The two-component reactive adhesive Litoelastic EVO is suitable for the glueing any type of ceramic tiles, thin slabs, mosaics and natural stone even if sensitive moisture, interior and exterior floors and walls and also on elastic and vibrating substrates, such as wood panelling and metal surfaces.



Cementitious grouts

Mixture of hydraulic binders, siliceous and calcareous aggregates, organic additives. The grout must be mixed with water or liquid additive before use.
Cementitious grouts are designated as type CG.

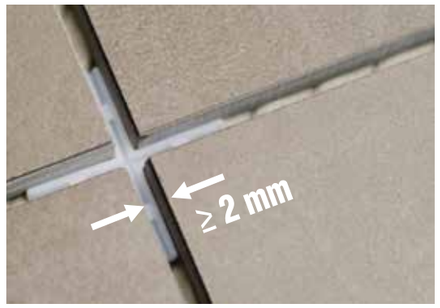
Reactive grouts

Mixture of epoxy resins, quartz aggregates and organic additives, in which hardening occurs by chemical reaction with the catalyst.
Products consisting of two or more components.
Reactive grouts are designated as type RG.

Choice of material for grout joints

The choice of material for grout joints must be made in accordance with the following project criteria:

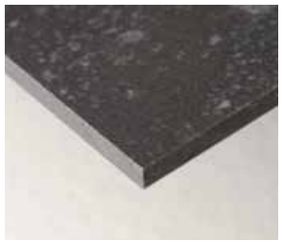
- **Width of the joint**;
- **Target area** (indoors/outdoors)and conditions of use envisaged.
- **Type of ceramic tile** (pressed/extruded; rectified/non rectified)



Joint width and type of ceramic tiling

Laying with "butt joints" is not allowed. Under no circumstances can a joint with a width of less than 2 mm be used. The width of the joints can range approximately from 2/3 mm in the case of tiles obtained by pressing, with good dimensional regularity (rectified tiles) in indoor areas, on both rigid and dimensionally stable substrates, up to 6/8 mm in reverse situations.

Pressed tile

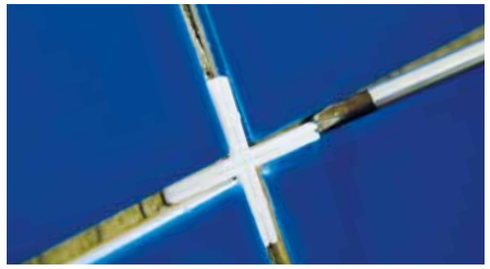


Pressed and rectified tile

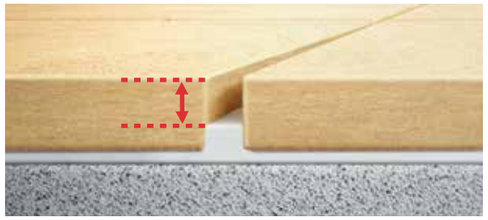
Extruded tile

Preliminary checks and joint preparation

The filling of joints must be done after the drying time of the cementitious mortar depending on the type of tile applied, the type of adhesive used and the environmental condition. Spacers used to ensure that the joints are straight should be removed before grouting.



The joints to be filled must be empty and free for at least two thirds of the tile thickness.



In the case of thin tiles, the joints must be empty and free for their entire thickness.

This also applies when removing old grouting in order to re-fill the joint with new grouting.

Preparation and application of the cementitious grout

Preparation of the mix

Pour the right quantity of liquid into a clean container and slowly add the powder, stirring with an electric drill fitted with a mixing paddle until obtaining a smooth and consistent mix without any lumps.
Leave the mix to settle for about 5 minutes and then briefly mix again for a few seconds.

Grouting the tiled surface

Introduce the mixture into the joints using a special rubber trowel, making diagonal movements across the joints, taking care to fill the entire thickness of the tiles without leaving any empty.
Any excess material is always removed by using the rubber trowel.

Cleaning and finishing

Once the waiting time for cleaning has elapsed, i.e. when the sealant has lost its plasticity and become opaque (usually 5 to 20 minutes depending on the absorption of the tiles and the climatic conditions), you can proceed with cleaning and finishing the surface of the joints using a damp stiff cellulose sponge.
Always use diagonal movements with respect to the direction of the joints so as not to remove any filling.

Grouts

Preparation and application of reactive grouts

Preparation of the mix

Pour the catalyst (component B) over component A (paste). The entire contents of the bag should be emptied out by rolling it up and gradually pressing the bag from the sealed side towards the side that has been cut.
Mix using an electric drill fitted with a mixing paddle until a uniform, lump-free mix is obtained. Scrape the sides and the bottom of the container, using a steel trowel, to make sure that all the paste is catalysed.
Hand mixing is not recommended.
The two parts are pre-dosed in their packaging, thus preventing the risk of mixing.
The paste is workable for approximately 1 hour at a temperature about +23°C.

Grouting the tiled surface

Apply the paste to the joints using a special green rubber float (art. 946 GR).
For large surfaces, an electric single-brush floor maintenance machine equipped with an abrasion-resistant rubber scraper can be used. Remove the excess product using the rubber float.
It is ready for foot traffic after 24 hours.
At a temperature of +15°C, it takes three days before the surface is set for light foot traffic. The floor is ready to use and resistant to chemicals after 5 days at a temperature of +23°C and after 10 days at a temperature of +15°C.

Cleaning and finishing

The grout work must be cleaned and finished while the product is still wet and in any case in the shortest possible time.Take care not to remove product from the joints or leave stains on the tile surface. Cleaning and finishing can be performed either manually or using an electric single-brush machine equipped with a felt disc.

First sprinkle clean water over the grouted surface.
If necessary, perform initial cleaning using a float fitted with a moistened white felt pad (art. 109 GBNC). Make circular movements in both clockwise and anticlockwise directions in order to seal the sides of the tiles perfectly and to remove excess grout from the surface of the tiles.
Now perform a second pass with a sweepex sponge (art. 128/G0001) in order to obtain a smooth, closed surface and to remove completely the product from the surface of the tiles, without removing it from the joints, as well as to dry off the excess of water.
Replace the felt pad and sponge when they become soaked with resin and can no longer be cleaned.
Any stains or transparent product residue can be removed from the surface of the tiles after about 24 hours or after the joint has hardened, using the special Litonet EVO (floors) and Litonet Gel EVO (walls) detergents.

Joints done in situ

Joints in ceramic tiling

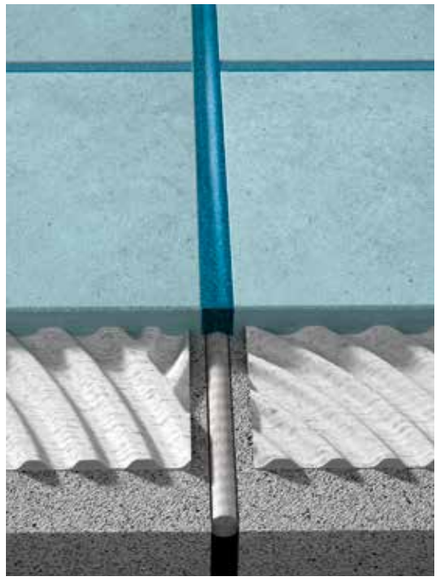
In the design stage, it is very important to evaluate carefully the installation of expansion joints when producing ceramic tiling. This is to ensure the durability of the tiled surfaces, where the term “durability” means the ability of the tiles to maintain their own initial features over time, both technically and aesthetically.

What is a joint?

It can be considered a shock absorber for the movements of the tiling, accommodating the expansions, contractions and the stresses that the materials undergo following phenomena of excursion or thermal variation, structural movements, dynamic stresses, vibrations induced by traffic, etc.

Fractionation joints

Fractionation joints must be done in the substrate every 25 m² for indoor areas (allocations of 5x5 or 6x4 m) and 9-10 m² per outdoor areas (allocations of 3x3 or 4x2.5 m) using a mechanical shear which must be at least 1/3 of the thickness. These joints must match and be continuous of the joints on the tiles.

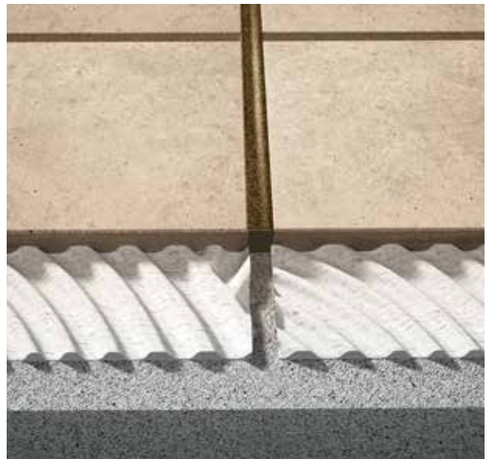


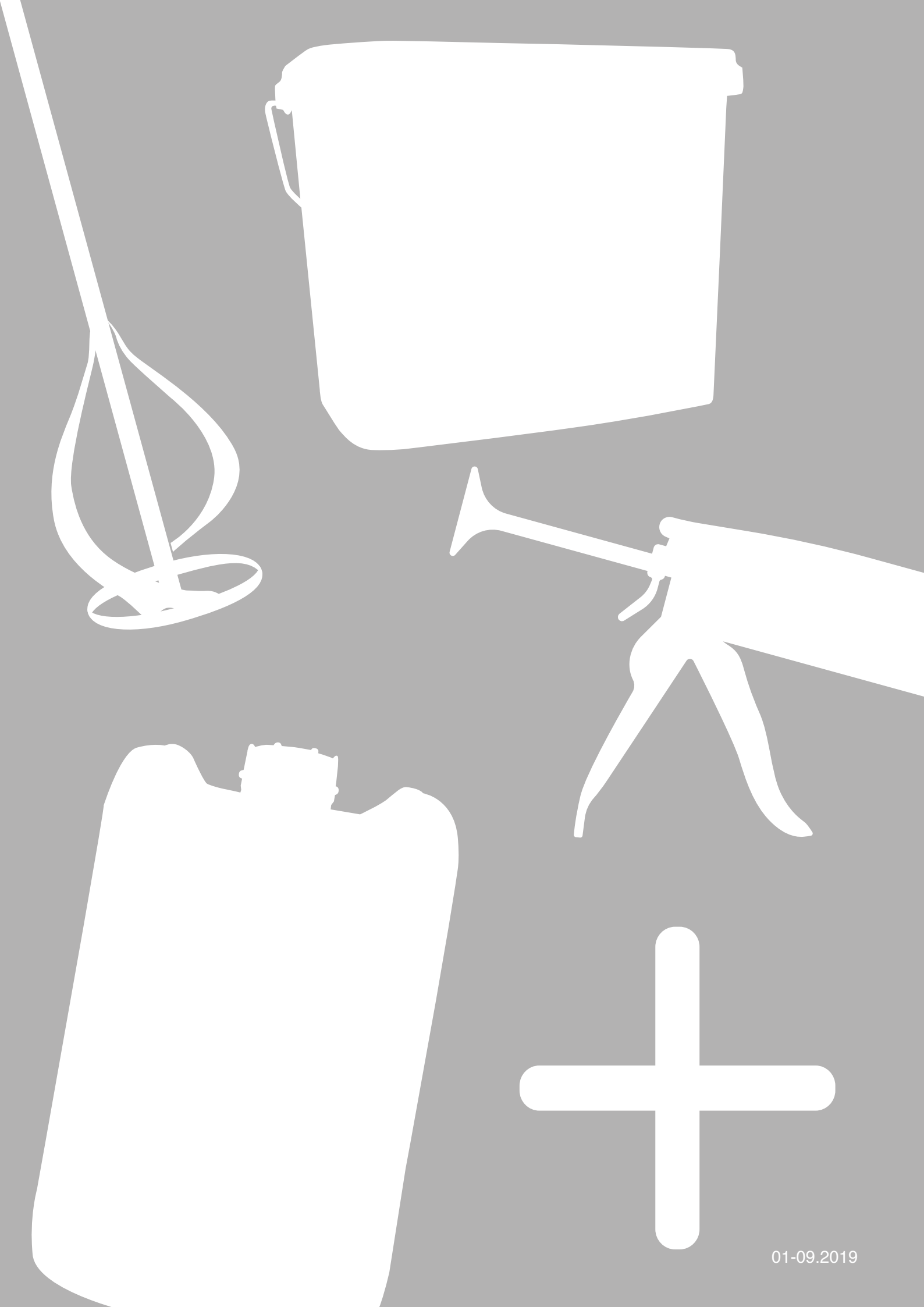
Expansion joints

Expansion joints must be prepared so as to subdivide extensive tiling into smaller expanses of the same size described for the fractionation joints.

Perimeter joints

Perimeter joints should always be arranged along the perimeter of the tiling, where this borders with the walls or other elevations from the floor such as columns and stairs, and that affect the thickness of the substrate and the ceramic tiling.





01-09.2019