ISOLASTIC

Latex additive to impart elasticity to cement-based adhesive

Isolastic is a synthetic polymer to be mixed with **Kerabond T** or **Adesilex P10** to improve their performances and deformability to meet the requirements of class C2 (improved cementitious adhesive for **Kerabond T**) according to EN 12004 and ISO 13007 and those of class S1 (deformable adhesive), or S2 (highly deformable adhesive) according to EN 12004 and ISO 13007 dependent on whether it is used neat or diluted with water.

WHERE TO USE

ISOLASTIC + KERABOND T

For interior and exterior bonding of:
· Ceramic tiles of every type (double-fired, single-fired, grès, clinker, glass mosaic, porcelain tiles, etc.).
· Stone material and large-size tiles.

Some application examples

· Ceramic tiles over underfloor heating and cooling installations.
· Ceramic tiles and stone material for exteriors (façades, swimming pools, balconies, terraces).
· Ceramic tiles on prefabricated concrete walls (load-bearing panels, prefabricated bathrooms.
· Ceramic tiles on old flooring (ceramic, marble, terrazzo, wood, etc.).
· Ceramic tiles on asphalt screeds or substrates.
· Ceramic tiles on deformable substrates (gypsum-board panels, reinforced concrete, acoustic insulation matting, fibre-cement board, etc.)

ISOLASTIC DILUTED WITH WATER AT A RATIO OF 1:1 + ADESILEX P10

Bonding on internal and external floors or vertical surfaces of oridinary or heavy or ceramic mosaic with paper facing or mash backings.

Some application examples

· Laying glass or ceramic mosaic on non-absorbent surfaces (**Mapelastic**, **Mapelastic Smart**, **Mapegum WPS**, existing tiles, etc.).
· Laying glass or ceramic mosaic in swimming pools, storage tanks, etc., or even on absorbent surfaces.
· Laying glass or ceramic mosaic on flexible surfaces (plasterboard panels, reinforced cement, cement fibre, wood, or derived materials, provided they are well fastened).

TECHNICAL CHARACTERISTICS

Isolastic is a very fluid, pinkish-white liquid composed of water dispersed extremely elastic polymer which, when mixed with cement-based adhesives, improves adhesion to all substrates, deformability, and impermeability, once hydration has taken place.

RECOMMENDATIONS

Kerabond T or **Adesilex P10** mixed with **Isolastic** should not be used for:
· Installing stone slabs subject to moisture movement;
· Installing marble or natural stone subject to efflorescence or staining from moisture;

MAPEI

· Installing tiles in reservoirs, swimming pools, or refrigeration rooms that need to be put into service quickly;
· Installing on metal, rubber, PVC, and linoleum surfaces.
For any clarification, please contact your local MAPEI representative.
In hot and dry climates the adhesive obtained by mixing **Isolastic** with **Kerabond T** or **Adesilex P10** has a relatively short open time with the formation of surface skin that must be removed by re-trowelling.

APPLICATION PROCEDURE

Preparation of the substrate

All substrates receiving **Kerabond T** or **Adesilex P10** + **Isolastic** must be flat, mechanically strong, and free from loose parts, grease, oil, paint, wax, etc. Precast concrete elements or in situ concrete must be fully cured in favourable weather conditions.
Cementitious substrates must not be subject to shrinkage once the tiles have been installed, renders should be fully cured with optimum moisture content. Cementitious screeds must have an overall cure of at least 28 days unless they have been made with the special MAPEI binders for screeds such as **Mapecem**, **Mapecem Pronto**, **Topcem** or **Topcem Pronto**.
Surfaces that are too hot due to exposure to direct sunlight should be cooled by dampening them with water.
Gypsum substrates and anhydrite screeds must be perfectly dry (maximum residual moisture 0.5%), sufficiently hard, and free from dust. In common with good tiling practices, such surfaces must be sealed with **Primer G** or **Eco Prim T** to ensure uniformity of surface absorbency. Areas subject to extreme dampness must be primed with **Primer S**.

Mixing ratio

The mixing ratio is determined by the degree of deformability required of the adhesive: use **Isolastic** as a complete substitute for mixing water when a highly deformable adhesive (class S2 according to EN 12004) or ISO 13007 is required, e.g for substrates subject to significant movement such as concrete structures with less than 6 months old, for large size tiles or slabs (over 900 cm^2) or for those subject to considerable sudden temperature changes.
Isolastic may be used at 50% concentration (mixed 1:1 with water) when a deformable cementitious adhesive (class S1 according to EN 12004 or ISO 13007) is required, e.g. on moderately unstable substrates, on sufficiently cured concrete structures, for small formats (mosaics, tozzetti, etc.).
Kerabond T + **Isolastic** at 100%: mix a 25 kg bag of **Kerabond T** with about 8-8.5 kg of **Isolastic**.
Approx. 8.25 kg as per the application data (33%) of **Isolastic** + water mix are required for a 25 kg bag of **Kerabond T**.
Adesilex P10 must always be mixed with **Isolastic** diluted with water at a ratio of 1: 1.
For every 25 kg bag of **Adesilex P10**, approximately 4.5 kg of **Isolastic** and 4.5 kg of water are required.
A lower ratio can be considered based on project requirements and the intended use of the final surface.

Preparation of the mix

Pour the powder into the liquid and continuously stir the mix with a slow-speed mechanical stirrer until it becomes a smooth paste, lump-free paste. Allow the mix to settle for a few minutes and, after further stirring, proceed with the application.

Application of the mix

Apply the mix to the substrate with a medium-sized notched trowel. Choose a trowel that transfers the adhesive to at least 65-70% to the back of tiles for walls and floors in light foot traffic situations and in interiors, and 100% coverage to the back of tiles used in heavy traffic areas and outdoors.
To obtain good adhesion, first, apply a thin coat of the mix onto the substrate using the flat side of the trowel, then immediately after applying the desired thickness of the mix using the appropriate notched trowel according to the type and size of the tiles.
To enhance adhesion e.g. for heavy-duty traffic areas, and larger format tiles, the back buttering technique should be utilised.

Installation of the tiles

Follow the same recommendations as outlined in the Technical Data Sheet for the adhesive which **Isolastic** is to be mixed with. However, greater attention should be paid to the open time which, in the equivalent relative temperature and humidity conditions, will be slightly shorter than the open time of the basic product.

N.B. *With exterior installations, in swimming pools, reservoirs, large sizes (over 400 cm^2), or floors to be polished in-situ, it is advisable to spread a layer of adhesive on the backs of the tiles (back buttering) well, so as to ensure perfect contact and the absence of voids. Always be careful about the formation of surface skin. For working outside below +5°C or above +40°C, please consult your local MAPEI representative for advice.*

Cleaning

Tools can be cleaned using plenty of water before the adhesive begins to set. After setting, cleaning becomes very difficult but can be helped with a solvent such as white spirit.

Fixing large size tiles with Kerabond T + Isolastic

Laying over an underfloor heating installation

Laying on old tiles

GROUTING AND SEALING

Wall joints can be grouted after 4-8 hours and floor joints after 24 hours with the special Mapei cementitious or epoxy grouts, available in different colours.
Expansion joints must be sealed with the special MAPEI sealants

SET TO LIGHT FOOT TRAFFIC

Floors are ready to receive light foot traffic after 24 hours.

READY FOR USE

Surfaces subject to heavy-duty loading are ready for use after approximately 14 days. Basins and swimming pools can be filled after 4 weeks (+23°C).

PACKAGING

25 kg drums.

STORAGE

When stored in dry conditions in the original, unopened bags, **Isolastic** has a shelf life of 12 months. If stored at high temperatures and or high humidity conditions the shelf life may be reduced.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Isolastic is not hazardous according to the regulation standards on the classification of mixtures. It is recommended to wear protective gloves and goggles and to take the usual precautions for handling chemical products. For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)
Complies with the following standards:
– ISO 13007 and EN 12004 as C2ES1 or C2ES2
– European EN 12004 as S1 or S2 according to the type of adhesive used and dilution ratio with Isolastic
– American ANSI A118.1 and 4 - 1999
– American ANSI A136.1 Type 1

PRODUCT IDENTIFICATION	
Consistency:	fluid liquid
Colour:	pinkish white
Density (g/cm³):	1.03
pH:	5
Dry solids content (%):	34
Brookfield viscosity (mPa·s):	40

APPLICATION DATA (at +23°C - 50% R.H.)

	Kerabond T + Isolastic (100%)	**Kerabond T + Isolastic diluted 1:1**	**Adesilex P10 + Isolastic diluted 1:1**
Mixing ratio:	100 : 33	100 : 30	100 : 36 (18 parts of water and 18 parts of **Isolastic**)
Consistency of mix:	very pasty	very pasty	very creamy
Colour:	grey/white	grey/white	white
Density of the mix (kg/m³):	1500	1500	1450
pH of mix:	over 12		
Pot life:	8 hours		
Application temperature range:	from +5°C to +40°C		
Open time (according to EN 1346):	30 minutes		
Adjustability time:	approx. 45 minutes		
Grouting wall joints:	after 4-8 hours		
Grouting floor joints:	after 24 hours		
Set to light foot traffic:	24 hours		
Ready for use:	14 days		

FINAL PERFORMANCE

	Kerabond T + Isolastic (100%)	**Kerabond T + Isolastic diluted 1:1**	**Adesilex P10 + Isolastic diluted 1:1**
Tensile adhesion strength according to EN 1348 (N/mm²):			
– initial (after 28 days):	2.4	2.1	2.1
– after heating:	2.5	2.0	3.0
– after water immersion:	1.6	1.3	1.3
– after freeze-thaw cycles:	1.8	1.6	1.4
Resistance to alkali:	excellent		
Resistance to oils:	excellent (poor to vegetable oils)		
Resistance to solvents:	excellent		

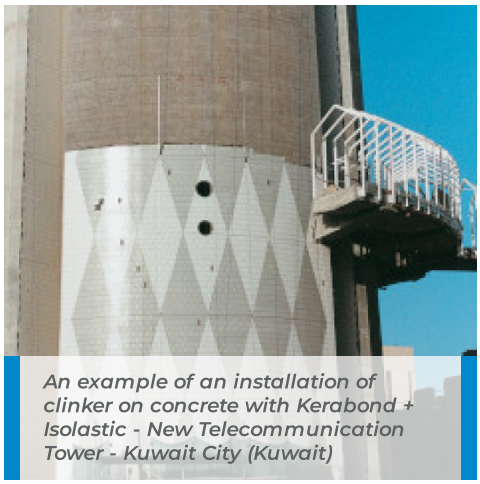
Temperature when in use:	from –30°C to +90°C		
Deformability according to EN 12004:	> 5 mm S2 highly deformable	> 2.5 S1 deformable	> 2.5 S1 deformable

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

All relevant references for the product are available upon request and from www.mapei.com



An example of an installation of clinker on concrete with Kerabond + Isolastic - New Telecommunication Tower - Kuwait City (Kuwait)

"Porcelain" quarry tiles laid with Kerabond + Isolastic - Civic Center - North York Ontario (Canada)

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