

Isolastic

**Latex additive
to impart elasticity
to cement based
adhesives**



Isolastic is a type of latex mixed into **Kerabond**, **Kerabond T**, **Kerafloor** and **Adesilex P10**, either as is or diluted 1:1 with water, in order to meet the requirements defined in EN 12004 for the following classifications:

Product	Classification according to EN 12004	Description
Kerabond + Isolastic	C2ES2	Improved, highly deformable cementitious adhesive with extended open time
Kerabond + Isolastic diluted 1:1 with water	C2ES1	Improved, deformable cementitious adhesive with extended open time
Kerabond T + Isolastic	C2ES2	Improved, highly deformable cementitious adhesive with extended open time
Kerabond T + Isolastic diluted 1:1 with water	C2ES1	Improved, deformable cementitious adhesive with extended open time
Kerafloor + Isolastic	C2ES2	Improved, highly deformable cementitious adhesive with extended open time
Kerafloor + Isolastic diluted 1:1 with water	C2ES1	Improved, deformable cementitious adhesive with extended open time
Adesilex P10 + Isolastic diluted 1:1 with water	C2ES1	Improved, deformable cementitious adhesive with extended open time

WHERE TO USE

ISOLASTIC + KERABOND, KERABOND T and KERAFLOR

For interior and exterior bonding of:

- ceramic tiles of every type (double fired, single fired, grès, klinker, glass mosaic, porcelain tiles etc.);
- stone material and large-size tiles.

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

Bonding on internal and external floors or vertical surfaces of glass or ceramic mosaic on paper or mesh backings, even heavy ones.

Some application examples

ISOLASTIC + KERABOND or KERABOND T

- Ceramic tiles over underfloor heating installations.
- Ceramic tiles and stone material for exteriors (façades, swimming pools, balconies, terraces).
- All types of ceramic tiles, including slim tiles on façades.
- Ceramic tiles on precast concrete walls (load-bearing panels, precast bathrooms, walls in “tunnel” systems, etc.).
- 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, fibre-cement board, etc.).
- Large-sized tiles.
- Ceramic tiles on surfaces waterproofed with **Mapelastic**, **Mapelastic Smart**, **Mapelastic AquaDefense**, etc.

ISOLASTIC+KERAFLOR

For interior and exterior bonding of:

- large-size ceramic tiles (over 30x30 cm);
- ribbed klinker tiles, cotto toscano, stone slabs, etc., needing layers of adhesive thicker than 5 mm;
- ceramic tiles on substrates with irregularities up to 15 mm.

ISOLASTIC DILUTED 1:1 WITH WATER + ADESILEX P10

- Laying glass or ceramic mosaic on non-absorbent surfaces (**Mapelastic**, **Mapegum WPS**, 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).



Isolastic

TECHNICAL CHARACTERISTICS

Isolastic is a very fluid, pinkish-white liquid composed of a water dispersion of an 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, Kerabond T, Kerafloor or Adesilex P10 mixed with **Isolastic** must never be used for:

- installing stone slabs subject to moisture movement;
- installing marble or natural stone subject to efflorescence or staining from moisture;
- 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.
- at temperatures lower than +5°C or higher than +40°C.

In dry, hot climates, the open time of adhesive made by mixing **Isolastic** into **Kerabond, Kerabond T, Kerafloor or Adesilex P10** is lower and a skin forms on the surface, which must then be removed by trowelling the adhesive.

APPLICATION PROCEDURE

Preparing the substrates

All substrates receiving **Kerabond, Kerabond T, Kerafloor or Adesilex P10 + Isolastic** must be flat, mechanically strong, free from loose parts, grease, oil, paint, wax, etc. Precast concrete elements or in situ concrete must be cured for at least 3 months in favourable weather conditions. Cementitious substrates must not be subject to shrinkage once the tiles have been installed, therefore in warm weather renders should be cured at least one week per centimetre of thickness. 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.

They must always be treated with **Primer G** or **Eco Prim T**. Areas subject to extreme damp must be primed with **Primer S**.

As a general rule, refer to the relative MAPEI technical documentation about substrate preparation before repairing cracks in substrates, consolidating rapid-drying screeds and levelling off installation surfaces.



Fixing large size tiles with **Kerabond T + Isolastic**



Laying over an underfloor heating installation

Top right: an example of an installation of granite with **Kerafloor + Isolastic** - Hranice Castle (Czech Republic)

Right: installation of a terracotta covering on the exterior of a concrete structure with **Kerafloor + Isolastic** - Versilia Hospital - Camaiore (Lucca), Italy



Mixing ratio

The mixing ratio is determined by the degree of deformability required of the adhesive: use **Isolastic** as a complete substitute for water when a highly deformable adhesive (class S2 according to EN 12004) is required, e.g for substrates subject to strong size variations such as concrete structures with less than 6 months curing, for large size tiles or slabs or for those subject to considerable sudden temperature changes.

Isolastic diluted 1:1 with water may be used when a deformable adhesive is required (class S1 according to EN 12004), for example on moderately unstable substrates, cured concrete substrates, etc.

Mixing ratios:

Product	Mixing ratio	
	Parts in weight	Kg
Kerabond + Isolastic	Kerabond: Isolastic = 100:33	8.5 kg of Isolastic per 25 kg bag of Kerabond
Kerabond + Isolastic diluted 1:1 with water	Kerabond: Isolastic : water = 100:16:16	4 kg of Isolastic + 4 kg of water per 25 kg bag of Kerabond
Kerabond T + Isolastic	Kerabond T : Isolastic = 100:33	8.5 kg of Isolastic per 25 kg bag of Kerabond T
Kerabond T + Isolastic diluted 1:1 with water	Kerabond T : Isolastic : water = 100:16:16	4 kg of Isolastic + 4 kg of water per 25 kg bag of Kerabond
Kerafloor + Isolastic	Kerafloor : Isolastic = 100 : 30	7.5 kg of Isolastic per 25 kg bag of Kerafloor
Kerafloor + Isolastic diluted 1:1 with water	Kerafloor : Isolastic : water = 100:14:14	3.5 kg of Isolastic + 3.5 kg of water per 25 kg bag of Kerafloor
Adesilex P10 + Isolastic diluted 1:1 with water	Adesilex P10 : Isolastic : water = 100:18:18	4.5 kg of Isolastic + 4.5 kg of water per 25 kg bag of Adesilex P10

Preparing the mix

When **Isolastic** is used in dilution with water, thoroughly blend part of the **Isolastic** with a small amount of clean water first. Pour the powder into the liquid and continuously stir the mix with a slow speed mechanical stirrer until it becomes a smooth paste free of lumps. Let the mix stand for a few minutes and, after further stirring, proceed with the application.

Spreading the mix

Apply the adhesive on the substrate using a notched trowel. Use a trowel with a notch size which guarantees adequate buttering. To get good adhesion, spread an initial thin

TECHNICAL DATA (typical values)

Complies with the following standards:

- European EN 12004 C2ES (Kerabond/Kerabond T/ Kerafloor + Isolastic) and C2ES1 (Kerabond/ Kerabond T/Kerafloor/Adesilex P10 + Isolastic diluted 1:1 with water)
- ISO 13007-1 C2ES2
- American ANSI A118.1 and 4- 1999
- American ANSI A136.1 Type 1
- Canadian 71 GP 30 M type 2

PRODUCT IDENTITY

Type:	fluid liquid
Colour:	pinkish white
Density (g/cm ³)	1.03
pH:	7
Dry solids content (%):	35
Brookfield viscosity (mPa-s):	40

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

	Kerabond or Kerabond T + Isolastic	Kerafloor + Isolastic	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
Density of the mix (kg/m ³)	1,500	1,600	1,450
pH of mix:		over 12	
Pot life:		8 hours	
Application temperature range:		from +5°C to +40°C	
Open time (according to EN 1346):	20-30 minutes	20-30 minutes	30 minutes
Adjustability time:	approx. 45 minutes	approx. 45 minutes	45 minutes
Grouting wall joints:	after 4-8 hours	after 6-8 hours	after 4-8 hours
Grouting floor joints:	after 24 hours	after 24-36 hours	after 24 hours
Set to light foot traffic:	24 hours	24-36 hours	24 hours
Ready for use:	14 days	14 days	14 days

FINAL PERFORMANCE

	Kerabond or Kerabond T + Isolastic	Kerafloor + Isolastic	Adesilex P10 + Isolastic diluted 1:1
Tensile adhesion strength according to EN 1348 (N/mm ²):			
- initial (after 28 days):	2.4	2.0	2.1
- after heating:	2.5	2.1	3.0
- after water immersion:	1.6	1.4	1.3
- after freeze-thaw cycles:	1.8	1.5	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	> 5 mm S2 highly deformable	> 2.5 S1 deformable



Waterproofing, levelling and laying with Kerabond T + Isolastic



Laying over old tiles



Laying KERAION on a wall

Isolastic



layer of the adhesive mix on the substrate using the smooth side of the trowel, then immediately apply another layer of adhesive to the thickness required using the notched part of the trowel. Use a trowel suitable for the type and format of the tiles to guarantee that the backs of the tiles are adequately buttered.

Installing the tiles

The same recommendations apply as set out for the adhesive with which the **Isolastic** is mixed. 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. When installing on external surfaces, in storage tanks and swimming pools, large-sized tiles or flooring to be polished after installation, we recommend spreading a layer of adhesive also on the back of the tiles to guarantee perfect contact and that there are no voids or gaps.

GROUTING AND SEALING

Wall joints can be grouted after 4-8 hours and floor joints after 24-36 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 set to light foot traffic after 24-36 hours.

READY FOR USE

Surfaces are ready for use after approximately 14 days. Basins and swimming pools can be filled after 4 weeks.

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.

CONSUMPTION (kg/m²)

	Product	Consumption (kg/m ²)		
		powder	Isolastic	water
Mosaics and small tiles	Kerabond/Kerabond T + Isolastic	2-3	0.7-1	-
	Kerabond/Kerabond T / Adesilex P10 + Isolastic diluted 1:1 with water	2-3	0.3-0.5	0.3-0.5
Medium-sized tiles	Kerabond/Kerabond T / Kerafloor + Isolastic	4-5	1.3-1.7	-
	Kerabond/Kerabond T / Adesilex P10 + Isolastic diluted 1:1 with water	4-5	0.6-0.9	0.6-0.9
Large tiles	Kerabond/Kerabond T / Kerafloor + Isolastic	> 6	> 2	-
	Kerabond/Kerabond T / Adesilex P10 + Isolastic diluted 1:1 with water	> 6	> 1	> 1



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

PACKAGING

25, 10 and 5 kg drums and 1 kg packs.

STORAGE

Isolastic can be stored for 24 months in the original packing. Protect from frost.

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 our latest version of the Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

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 klinker on concrete with Kerabond + Isolastic - New Telecommunication Tower - Kuwait City (Kuwait)



BUILDING THE FUTURE