

# Isolastic

**Latex additive to impart elasticity to cementitious adhesives**



**Isolastic** is a type of latex mixed with **Kerabond**, **Kerabond T**, **Kerabond Plus** and **Adesilex P10**, undiluted 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	High-performance, highly deformable cementitious adhesive with extended open time
Kerabond + Isolastic diluted 1:1 with water	C2ES1	High-performance, deformable cementitious adhesive with extended open time
Kerabond T + Isolastic	C2ES2	High-performance, highly deformable cementitious adhesive with extended open time
Kerabond T + Isolastic diluted 1:1 with water	C2ES1	High-performance, deformable cementitious adhesive with extended open time
Kerabond Plus + Isolastic	C2ES2	High-performance, highly deformable cementitious adhesive with extended open time
Kerabond Plus + Isolastic diluted 1:1 with water	C2ES1	High-performance, deformable cementitious adhesive with extended open time
Adesilex P10 + Isolastic diluted 1:1 with water	C2ES1	High-performance, deformable cementitious adhesive with extended open time

## WHERE TO USE

### ISOLASTIC + KERABOND, KERABOND T and KERABOND PLUS

For interior and exterior bonding of:

- ceramic tiles of every type (double fired, single fired, grès, klinker, glass mosaic, porcelain tiles, etc.);
- stone material as long as it is dimensionally stable.

### ISOLASTIC DILUTED 1 : 1 WITH WATER + 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, KERABOND T or KERABOND PLUS

- Ceramic tiles over underfloor heating installations.
- Ceramic tiles and stone material for exteriors (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 products from the **Mapelastic** range.

##### 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., even on absorbent surfaces.



- Laying glass or ceramic mosaic on deformable 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 a water dispersion of an extremely elastic polymer, which, when mixed with cementitious adhesives, improves adhesion to all substrates, deformability and impermeability, once hydration has taken place.

## RECOMMENDATIONS

**Kerabond, Kerabond T, Kerabond Plus** 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;
- installation 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 the adhesive made by mixing **Isolastic** into **Kerabond, Kerabond T, Kerabond Plus** or **Adesilex P10** is shorter. A skin may form on the surface, which must then be removed and fresh adhesive applied.

## APPLICATION PROCEDURE

### Preparing the substrates

All substrates receiving **Kerabond, Kerabond T, Kerabond Plus** 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 **Mapcem, Mapcem 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 humidity 0.5%, 0.3% in case of heated screeds) 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**. On existing floors, remove any traces of grease, wax, dirt, etc. by using specific products or by abrading the surface with a power tool.

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.

## 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-sized 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 T
Kerabond Plus + Isolastic	Kerabond Plus : Isolastic = 100 : 33	8.5 kg of Isolastic per 25 kg bag of Kerabond Plus
Kerabond Plus + Isolastic diluted 1 : 1 with water	Kerabond Plus : Isolastic : water = 100 : 16 : 16	4 kg of Isolastic + 4 kg of water per 25 kg bag of Kerabond Plus
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 **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 mixer 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 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. Use the double-buttering technique and spread the adhesive also on the back of the tiles to ensure complete wetting and the absence of gaps, in the following cases: external installations, when installing large-sized tiles, thin tiles, tiles with reliefs on their back, flooring to be polished after installation or subject to high static or dynamic loads, heated floors or storage tanks and swimming pools.

## TECHNICAL DATA (typical values)

Complies with the following standards:

- European EN 12004 C2ES2 (Kerabond/Kerabond T/ Kerabond Plus + Isolastic) and C2ES1 (Kerabond/ Kerabond T/Kerabond Plus/Adesilex P10 + Isolastic diluted 1 : 1 with water)
- ISO 13007-1 C2ES2 (Kerabond/Kerabond T/ Kerabond Plus + Isolastic) and C2ES1 (Kerabond/ Kerabond T/Kerabond Plus/Adesilex P10 + Isolastic diluted 1 : 1 with water)

### PRODUCT IDENTITY

Consistency:	fluid liquid
Colour:	pinkish white
Density (g/cm <sup>3</sup> )	1.03
pH:	5-6
Dry solids content (%):	35
Brookfield viscosity (mPa-s):	40
EMICODE:	EC1 Plus - very low emission

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

	Kerabond or Kerabond Plus or Kerabond T + Isolastic	Adesilex P10 + Isolastic diluted 1 : 1
Mixing ratio:	100 : 33	100 : 36 (18 parts of water and 18 parts of Isolastic)
Consistency of mix:	very pasty	very creamy
Colour:	grey/white	white
Density of the mix (kg/m <sup>3</sup> )	1,500	1,450
pH of mix:		over 12
Pot life:		8 hours
Application temperature range:		from +5°C to +40°C
Open time:	20-30 minutes	30 minutes
Adjustability time:	approx. 45 minutes	45 minutes
Grouting wall joints:	after 4-8 hours	after 4-8 hours
Grouting floor joints:	after 24 hours	after 24 hours
Set to light foot traffic:	24 hours	24 hours
Ready for use:	14 days	14 days

### FINAL PERFORMANCE

	Kerabond or Kerabond Plus or Kerabond T + Isolastic	Adesilex P10 + Isolastic diluted 1 : 1
Tensile adhesion strength (N/mm <sup>2</sup> ):		
– initial (after 28 days):	2.4	2.1
– after heating:	2.5	3.0
– after water immersion:	1.6	1.3
– after freeze-thaw cycles:	1.8	1.4
Resistance to alkalis:		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

# Isolastic



## Installing the tiles

Follow the recommendations shown in the technical data sheet of the adhesive with which **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.

## 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/m<sup>2</sup>)

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

## PACKAGING

25 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

Instructions for the safe use of our products



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

can be found on the latest version of the Safety Data Sheet, available from our website [www.mapei.com](http://www.mapei.com).

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](http://www.mapei.com)

## LEGAL NOTICE

*The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.*

*The most up-to-date TDS can be downloaded from our website [www.mapei.com](http://www.mapei.com).*

**ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.**

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**



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



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