

Isolastic

Latex additive to elasticize cement based adhesives



Isolastic is a latex to be mixed with **Kerabond**, **Kerafloor** or **Adesilex P10** to improve their performances and deformability to meet the requirements of class C2 (improved cementitious adhesive) according to EN 12004 and those of class S1 (deformable adhesive) or S2 (highly deformable adhesive) according to EN 12002, according to whether it is used neat or diluted with water.

WHERE TO USE
ISOLASTIC + KERABOND

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 (over 30x30 cm).

Some application examples

- Ceramic tiles over underfloor heating installations;
- ceramic tiles and stone material for exteriors (façades, swimming pools, balconies, terraces);
- ceramic tiles on prefabricated concrete walls (bearing panels, prefabricated bathrooms, walls in tunnel prefab. systems);
- 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, asbestos cement, etc.);

ISOLASTIC+KERAFLOOR

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.

Some application examples

- Ceramic tiles and stone material for exteriors (façades, swimming pools, balconies, terraces), also on deformable substrates;

- large-size ceramic floor tiles laid on underfloor heating installations.

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

- 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, if fastened down well enough).

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, **Kerafloor** or **Adesilex P10** mixed with **Isolastic** must never be used for:

- installing stone slabs subject to deformation from moisture;
- 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.

In hot and dry climates the adhesive obtained by mixing



Isolastic

Isolastic with **Kerabond**, **Kerafloor** or **Adesilex P10** has a short open time with the formation of a surface skin which must be removed by re-trowelling.

APPLICATION PROCEDURE

Preparing the substrates

All substrates receiving **Kerabond**, **Kerafloor** or **Adesilex P10 + Isolastic** must be flat, mechanically strong, free of loose parts, grease, oil, paint, wax, etc. Precast concrete elements or placed in situ 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**.

Cool surfaces that are too hot due to exposure to direct sunlight 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 absolutely be treated with **Primer G** or **Mapeprim SP**. Areas subject to extreme damp 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 water when a highly deformable adhesive (class S2 according to EN 12002) 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 (over 900 cm²) or for those subject to considerable sudden temperature changes.

Isolastic may be used at 50% strength (mixed 1:1 with water) when a deformable cementitious adhesive (class S1 according to EN 12002) is required, eg. on moderately unstable substrates, on sufficiently cured concrete structures, for small formats (mosaics, tozzetti, etc.).

Kerabond+Isolastic at 100%: mix a 25 kg bag of **Kerabond** with about 8.5 kg of **Isolastic**.

Kerafloor+Isolastic at 100%: mix a 25 kg bag of **Kerafloor** with about 7.5 kg of **Isolastic**.

When **Isolastic** is used at 50% strength, mix well to prevent one part having **Isolastic** and another part pure water.

Approx. 8 kg of **Isolastic**+water mix are required for a 25 kg bag of **Kerabond**. Approx. 7 kg of mix are required for a 25 kg bag of **Kerafloor**.

Adesilex P10 must always be mixed with **Isolastic** and 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.



Fixing large size tiles with **Kerabond + 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



Preparing 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 free of lumps.

Let the mix sit for a few minutes and, after further stirring, proceed with the application.

Applying the mix

Apply the mix on the substrate with a medium-sized notched trowel. Choose the trowel that transfers the adhesive to at least 65-70% of the back of the tiles for walls or floors set to light foot traffic in interiors and 100% coverage for heavy traffic areas outdoors.

To obtain a good adherence, first apply a thin coat of the mix onto the substrate using the flat side of the trowel, then immediately after apply the desired thickness of the mix using the appropriate notched trowel according to the type and size of the tiles.

For example:

Type of tile	Notching
mosaics or tiles up to 5x5 cm	3-4 mm
up to 10.8x10.8	5 mm
up to 20x20	6 mm
over 20x20	according to tile back
large formats, klinker tiles, natural stone etc.	the Kerafloor trowel

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. With exterior installations, in swimming pools, reservoirs, large sizes (over 400 cm²), or floors to be polished in situ, it is advisable to spread a layer of adhesive on the backs of the tiles as well, so as to ensure perfect contact and the absence of voids. Always be careful about the formation of a surface skin. It is advisable never to work in temperatures below +5°C or above +40°C.

TECHNICAL DATA (typical values)

In compliance with:

- European EN 12004 as C2
- European EN 12002 as S1 or S2 according to the type of adhesive used and dilution ratio with Isolastic
- American ANSI A118.1 e.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/cm³):	1.03
pH:	7
Dry solids content (%):	35
Brookfield viscosity (mPa*s):	40
Storage:	24 months in original packing. Protect from frost
Hazard classification according to EC 99/45:	none. Before using refer to the "Safety instructions for the preparation and application" paragraph and the information on the packing and Safety Data Sheet
Customs class:	3906 90 00

APPLICATION DATA at +23°C - 50% R.H.

	Kerabond + Isolastic	Kerafloor + Isolastic	Adesilex P10 + Isolastic diluted 1:1
Mixing ratio:	100 : 33	100 : 30	100 : 30 (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/m³):	1500	1600	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):	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 PERFORMANCES

	Kerabond + Isolastic	Kerafloor + Isolastic	Adesilex P10 + Isolastic diluted 1:1
Tensile adhesion strength according to EN1348 (N/mm²):			
- 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 12002:	> 5 mm S2 highly deformable	> 5 mm S2 highly deformable	> 2.5 S1 deformable



Waterproofing levelling and laying with Kerabond + Isolastic



Laying over old tiles



Laying KERAION on a wall

Isolastic

All relevant references of the product are available upon request



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

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)

	Isolastic	Kerabond or Kerafloor	Adesilex P10
Mosaics and small sized tiles:	0.6	1.8	0.35
Normal sized tiles (up to 20x20 cm):	0.8	2.4	-
Large sized tiles floors, outdoors:	1.2-1.5	3.6-4.5	-

PACKAGING

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

STORAGE

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

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Isolastic is not hazardous according to the ruling norms on the classification of mixtures. It is recommended to take the usual precautions for handling chemical products. The Safety Data Sheet is available on request for professional users.

FOR PROFESSIONALS.

WARNING

Although the technical details and recommendations contained in this product report 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 applications; 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.



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



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