

Adesilex FIS13

Adhesive in water dispersion for heat insulation system panels



WHERE TO USE

Bonding, levelling and smoothing of expanded polystyrene or expanded polyurethane, rock wool, cork, etc. insulation panels for walls and ceilings directly onto plaster, concrete and cement blocks.

Some application examples

- Exterior heat insulation system.
- Insulation under roofing tiles.
- Insulating radiator niches.
- Insulating attic floors.
- Interior insulation of walls in structures above ground.
- Interior insulation of cellar walls.
- Interior insulation of attic roofs.
- Exterior insulation with ventilated façade.

TECHNICAL CHARACTERISTICS

Adesilex FIS13 is a whitish paste with a synthetic resin base in water dispersion, selected aggregates, and special additives, produced according to a formula developed in the MAPEI Laboratories.

When mixed with cement, **Adesilex FIS13** forms a highly adhesive, highly thixotropic, easily workable mortar that can be applied vertically without sagging and with no slippage even when used for large-size insulating panels.

Adesilex FIS13 hardens without appreciable shrinkage and bonds to all materials usually used in building.

RECOMMENDATIONS

Do not use **Adesilex FIS13** for:

- fixing any type of ceramic tiles, mosaics, marble, etc. (use the appropriate products of the MAPEI ceramic tile adhesives line);
- bonding insulation panels to gypsum walls (conventional, sprayed, panels) or ready-to-use gypsum-based plasters, unless a coat of **Primer G** or **Mapeprim SP** is applied beforehand;
- bonding insulation panels to walls or floors subject to heavy movement (wood, fibrous concrete) (use **Keralastic**);
- bonding insulation panels onto metal surfaces (use **Keralastic**);
- bonding and smoothing extruded foam panels with non-adhesive surfaces (abrade surface to eliminate repellent agent);
- bonding panels to exteriors (heat insulation system) on surfaces in poor condition or inconsistent mortars (unless mechanically fixed with plastic mushroom-head plugs).

APPLICATION PROCEDURE

Preparing the substrate

Substrates must be compact, free from dust, and loose material, grease, oils, other adhesives, etc.



TECHNICAL DATA (typical values)													
PRODUCT IDENTITY													
Consistency:	thick paste												
Colour:	white												
Density (g/cm³):	1.5												
pH:	8.5-9												
Storage:	24 months in a dry place in original unopened packaging												
Hazard classification according to EC 1999/45:	none. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet												
Customs class:	3506 91 00												
APPLICATION DATA													
Mixing ratio:	1 part of Adesilex FIS13 with 0.6-0.8 parts by weight of cement CEM II/A-LL 42.5 R												
Density (kg/m³):	1,700												
pH of mix:	10.9												
Application temperature range:	+5°C to +35°C												
Open time:	4 hours at +23°C												
Final cure:	28 days												
FINAL PERFORMANCE DATA													
Resistance to moisture:	excellent												
Resistance to ageing:	excellent												
Resistance to temperature:	-30°C to +90°C												
Flexibility:	good												
Performance figures according to ETAG 004 as confirmed by certificate N° ETA 04/0061 (using a panel of Stirofoam IB-A produced by Dow Chemical):													
Grain distribution of the product:	<table border="1"> <thead> <tr> <th>%</th> <th>mm</th> </tr> </thead> <tbody> <tr> <td>100.00</td> <td>1.00</td> </tr> <tr> <td>99.92</td> <td>0.80</td> </tr> <tr> <td>99.78</td> <td>0.50</td> </tr> <tr> <td>16.54</td> <td>0.20</td> </tr> <tr> <td>0.36</td> <td>0.04</td> </tr> </tbody> </table>	%	mm	100.00	1.00	99.92	0.80	99.78	0.50	16.54	0.20	0.36	0.04
%	mm												
100.00	1.00												
99.92	0.80												
99.78	0.50												
16.54	0.20												
0.36	0.04												
Retention of mixing water (%):	0.11												
Final performances (without reinforcement):													
Modulus of elasticity (N/mm²):													
- after 28 days:	591.63												
- after higrathermic cycles:	544.09												
Tensile strength (N):													
- after 28 days:	920.12												
- after higrathermic cycles:	334.68												
Elongation at breakage (%):													
- after 28 days:	1.42												
- after higrathermic cycles:	0.89												
Bonding strength on Stirofoam IB-A insulation panel produced by Dow Chemical (N/mm²):													
- in dry conditions:	0.25 (minimum value required: 0.08)												
- 2 days immersion + 2 hours at +23°C - 50% U.R.:	0.31 (minimum value required: 0.03)												
- 2 days immersion + 7 hours at +23°C - 50% U.R.:	0.63 (minimum value required: 0.08)												
Bonding strength on concrete (N/mm²):													
- in dry conditions:	1.91 (minimum value required: 0.25)												
- 2 days immersion + 2 hours at +23°C - 50% U.R.:	0.51 (minimum value required: 0.08)												
- 2 days immersion + 4 hours at +23°C - 50% U.R.:	1.25 (minimum value required: 0.25)												
Bonding strength on brick (N/mm²):													
- in dry conditions:	0.91 (minimum value required: 0.25)												
- 2 days immersion + 2 hours at +23°C - 50% U.R.:	0.72 (minimum value required: 0.08)												
- 2 days immersion + 7 hours at +23°C - 50% U.R.:	0.76 (minimum value required: 0.25)												

Gypsum substrates (plasters applied by hand or by machine, prefabricated panels, etc.) must be completely dry and free from dust. They must be treated with **Primer G** (see relevant technical data sheet) before bonding with **Adesilex FIS13**.

For levelling very uneven cement surfaces, **Nivoplan** is recommended.

Preparing the mix

Adesilex FIS13 must be prepared immediately before use by adding cement CEM II/A-LL 42.5 R in compliance with the standards UNI EN 197/1 in a proportion of 1 to 0.6-0.8 by weight.

Stir with a mechanical mixer until a thick, homogeneous trowellable paste is obtained.

Do not use mixes which have already begun to set. Do not add water or **Adesilex FIS13** to a mix which has lost its workability.

Applying the mix

• As an adhesive

Apply **Adesilex FIS13** with a notched trowel directly onto the entire surface of the back of the panel, or at several points with a flat-edged trowel.

For large panels, the adhesive must be applied over the entire surface.

Small and medium panels can be bonded at points and along edges. Follow the manufacturer's instructions while applying.

Apply pressure to the panels in order to ensure a positive bond to the substrate checking flatness with a strut.

• As smoothing compound on panels on walls (heat insulation system)

Wait at least 24 hours after fixing the panels. Spread an even first layer of **Adesilex FIS13** applied thick enough to incorporate the fibreglass mesh **Mapetherm Net** (approx. 1-2 mm).

Mapetherm Net must be pressed firmly into the fresh layer of the mix with a smooth trowel and must bridge the joints by at least 3-4 cm.

After the first layer is dry, apply a second layer until the mesh is completely covered and the surface is ready to receive its final covering.

Cleaning

Fresh **Adesilex FIS13** can be cleaned from tools with water. After setting, cleaning is difficult and can only be done mechanically.

CONSUMPTION

The consumption rate of **Adesilex FIS13** is as follows:

– for bonding insulating panels: 1-2 kg/m²

– for bonding insulating panels with a uniform layer on the back of the panel, using a N° 10 serrated trowel: 2-4 kg/m²

– for smoothing and levelling off purposes: 1.0-1.2 kg/m² per mm of thickness recommended thickness: 4 mm in 2 coats)

PACKAGING

Adesilex FIS13 is available in 15 kg and 25 kg drums.

STORAGE

Adesilex FIS13 is not inflammable. Protect from frost, during both shipping and storage. Avoid exposure to temperatures below 0°C. In a normal environment and in its original unopened packaging **Adesilex FIS13** is stable for at least 24 months.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Adesilex FIS13 is not hazardous according to the 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.

The Safety Data Sheet is available upon request.

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.

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

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