

MAPETHERM ARI GG

One component cementitious mortar for bonding and levelling thermal-insulating panels and thermal insulation systems



WHERE TO USE

- Bonding all types of thermal-insulating panels (EPS, XPS, mineral fibres, cork, wood fibres, etc.) directly on render, masonry and concrete on walls and ceilings.
- Smoothing thermal insulation systems on internal and external walls.

Some application examples

Bonding and smoothing internal and external thermal insulation systems such as **Mapetherm Mineral Wool** and **Mapetherm EPS** on:

- Cementitious render or lime-mortar render
- Concrete
- Concrete blocks
- Brick

Also suitable for smoothing:

- **Mapetherm Nordic C** (rendered, ventilated façade system)
- Aerated concrete
- Concrete blocks

TECHNICAL CHARACTERISTICS

Mapetherm ARI GG is a grey powder made from cement, selected sand, synthetic resin, polypropylene fibres and special additives, according to a formula developed in MAPEI's own research laboratories.

When mixed with water, it forms a mortar with the following characteristics:

- Low viscosity and, therefore, good workability.
- High thixotropic consistency: **Mapetherm ARI GG** may be applied on vertical surfaces without running and without the risk of insulating panels slipping or working loose.
- Bonding perfectly to most types of insulating panels and to all materials normally used in the building industry: repair mortar, traditional render and old, well-adhered paints or coatings.
- Hardens without shrinking.

RECOMMENDATIONS

- Do not use **Mapetherm ARI GG** to bond insulating panels on metallic surfaces or substrates subject to large movements.
- Do not use if the panels have a smooth surface, as good bonding may be impeded: polyurethane or mineral fibres with a surface coating of kraft paper, extruded polystyrene with a surface skin, etc. Do not bond the insulating panels on deteriorated substrates or crumbly render.
- Be aware of laws and regulations regarding the use of flammable insulation in façades and the application of render to such façades.

APPLICATION PROCEDURE

Preparation of the substrate

The substrate must be sound, strong and free of dust, loose particles, grease, oil, adhesive, etc. It is recommended to even out variations in the substrate using products from Mapei's construction range. Gypsum substrates (render applied by hand or with a rendering machine, prefabricated panels, etc.) must be perfectly dry and free of dust and, before bonding insulating panels with **Mapetherm ARI GG**, must be treated with **Primer G**.

Preparation of the mix

Pour the **Mapetherm ARI GG** while mixing in a container with 21 - 24 % by weight of clean water (approx. 5.25 - 6.0 litres of water per 25 kg of powder). Stir the mix, preferably with a low-speed mixer to avoid drawing in air, until a smooth, creamy, lump-free paste is obtained. Let the mix stand for 5 minutes, and stir again briefly before use. The mix obtained remains workable for approximately 3 hours.

Applying the product

Used as adhesive

Spread **Mapetherm ARI GG** directly on the back of the insulation panels in an even layer using a 10 mm notched trowel if the substrate is flat, or in a series of dots and beads if the wall is uneven. Apply perimeter band plus additional dabs in the centre of the panels.

Used as smoothing and levelling compound

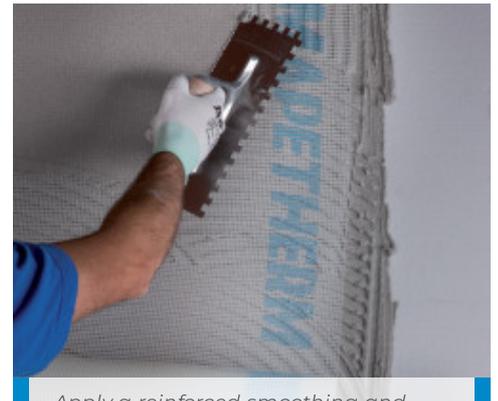
Once the adhesive is completely dry (at least 24 hours after applying the panels, depending on the curing conditions), spread an even layer of **Mapetherm ARI GG** on the surface and then embed **Mapetherm Net** alkali-resistant glass fibre mesh in the mortar. **Mapetherm Net** must be pressed down a little with a smooth trowel on the fresh layer of mortar, and must overlap by at least 10 cm along all joints. After 12 - 24 hours, apply a second layer of **Mapetherm ARI GG** to form a compact, even surface suitable for the surface treatment, which must only be applied once the smoothing layer is hardened and cured.



Press the panel in place to guarantee a good bond to the substrate



Lay the first coating of smoothing compound with Mapetherm ARI GG



Apply a reinforced smoothing and levelling layer by embedding Mapetherm Net



Finish off the surface of the smoothing and levelling layer with a sponge float

CLEANING

Tools and containers may be cleaned with water while **Mapetherm ARI GG** is still fresh.

CONSUMPTION

· For bonding insulating panels:
4 - 6 kg/m², depending on the bonding technique used.

· For smoothing and levelling:
1.35 - 1.55 kg/m² per mm of thickness (recommended thickness: min. 8 mm in 2 layers).

PACKAGING

Mapetherm ARI GG is available in 25 kg paper sacks and 1,200 kg big-bags.

STORAGE

Mapetherm ARI GG may be stored for 12 months in its original packaging in a dry place.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.no

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

Conformity with: EN 998-1 – ETAG 004 ETA 10/0024 - 10/0025

PRODUCT IDENTITY

Consistency:	powder
Colour:	grey
Maximum size of aggregate (mm):	approx. 1.0

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

Mixing ratio with water (%):	21 - 24
Consistency of mix:	thixotropic
Density of mix (kg/m ³):	approx. 1500
Application temperature:	from +5°C to +35°C
Workability time:	approx. 3 hours
Open time:	approx. 20 minutes
Adjustment time:	approx. 40 minutes
Waiting time before finishing:	15 days
Consumption (kg/m ²):	approx. 4.0 - 6.0 for bonding insulating panels approx. 1.35 - 1.55 as skimming compound (per mm of thickness)

FINAL PERFORMANCE

Modulus of elasticity (N/mm ²):	5,600
Flexural strength after 28 days (N/mm ²):	approx. 3.0
In service temperature:	from -30°C to +90°C

PERFORMANCE CHARACTERISTICS ACCORDING TO EN 998-1

Performance characteristic	Test method	GREY
Dry bulk density (kg/m ³):	EN 1015-10	1 200
Compressive strength after 28 days (N/mm ²):	EN 1015-11	9.59 Category CS IV
Adhesion (concrete) (N/mm ²):	EN 1015-12	≥ 1 failure mode (FP) = B
Capillary water absorption [kg/(m ² ·min ^{0.5})]:	EN 1015-18	0.06 Category W2
Water vapour permeability coefficient (μ):	EN 1015-19	15
Thermal conductivity (λ _{10 dry}) (W/mK):	EN 1745	0.32
Reaction to fire:	EN 13501-1	Euroclass A1



Reggio Emilia - Italy - Work on a private home using Mapetherm ARI GG



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 web site www.mapei.com

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