

MAPETHERM ARI GG

One component, large grained cementitious adhesive mortar for laying thermal insulation systems or for smoothing walls and insulation boards



WHERE TO USE

- Bonding all types of thermal-insulating panels (foam/extruded polystyrene, expanded polystyrene, mineral fibres, cork, etc.) directly on render, masonry and concrete on walls and ceilings.
- A reinforcing coat for thermal-insulating panels with embedded fibreglass reinforcing mesh on internal and external walls (thermal insulation system).

Some application examples

Bonding and smoothing internal and external insulating panels and thermal insulation systems on:

- cementitious render or lime-mortar render;
- concrete;
- concrete blocks;
- approved render boards;
- brickwork.

Also suitable for bonding insulation panels and reinforcing coat systems for:

- insulating inside faces of walls in rooms above ground;
- insulating inside faces of retaining walls in basements;
- insulating inside faces of loft ceilings;
- insulating external faces of ventilated façades;
- for use as a dash receiver and brick slip adhesive, plus synthetic brick slip or tile adhesive;
- for use with MAPEI approved backing boards as a render only system on to steel and timber framed buildings.

TECHNICAL CHARACTERISTICS

Mapetherm ARI GG is a grey or white powder made from cement, selected sand, synthetic resin polypropylene fibres and special additives with a fine grain size of up to 0.7 mm, developed 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, including large sized panels;
- bonds perfectly to all materials normally used in the building industry levelling products, 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, 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 crumbling render.

APPLICATION PROCEDURE

Preparation of the substrate

The substrate must be sound, strong and free of dust, loose parts, grease, oil, adhesive etc. It is recommended to use **Nivoplan** or **Mapewall GPR** to even out variations in masonry or cementitious substrates. Gypsum substrates must be perfectly dry, free of dust and treated with **Primer G** before bonding insulation panels.

Preparation of the mix

Pour the **Mapetherm ARI GG** while mixing in a container with 24-26% by weight of clean water (approx. 6.0 - 6.5 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.

Spreading the mix

Used as adhesive

Spread **Mapetherm ARI GG** directly on to the back of the panels, in an even layer, using a 10 mm notched trowel when the substrate is flat, or with a minimum coverage of at least 40% using a perimeter band, with additional central dabs, if the substrate is uneven. After applying, press the panels down well to guarantee a secure bond to the substrate and check the flatness with a straightedge.

Used as smoothing and levelling compound

Once the adhesive is completely dry, at least 24 hrs after fitting the panels, install specified **Mapetherm** fixings, before spreading an even layer of **Mapetherm ARI GG** on the surface and then embed **Mapetherm Net** alkali-resistant glass fibre mesh in the mortar. The **Mapetherm Net** must be pressed down with a smooth trowel on the fresh layer of mortar and must overlap by at least 10 cm along the joints. After 12-24 hours, apply a second layer of **Mapetherm ARI GG** smoothing and levelling compound to form a compact, even surface suitable for the final coating which must only be applied once the smoothing layer is hardened and cured.

If smoothing over masonry, apply an even layer of **Mapetherm ARI GG** on the surface and then embed **Mapetherm Net** alkali-resistant glass fibre mesh into the top third of the mortar. The **Mapetherm Net** must be pressed down with a smooth trowel on the fresh layer of mortar and must overlap by at least 10 cm along the joints. After 12-24 hours, apply a second layer of **Mapetherm ARI GG** smoothing and levelling compound to form a compact, even surface suitable for the final coating which must only be applied once the smoothing layer is hardened and cured.



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



Laying of the first coating of smoothing compound with Mapetherm AR1 GG



Application of a reinforced smoothing and levelling layer by embedding Mapetherm Net



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

CLEANING

Tools and containers may be cleaned with water while **Mapetherm AR1 GG** is still fresh.

CONSUMPTION

- For bonding insulating panels:
4-6 kg/m² according to the bonding technique used.
- Smoothing and levelling:
1.3-1.5 kg/m² per mm of thickness (recommended thickness: approximately 4 mm in 2 layers).

PACKAGING

Mapetherm AR1 GG is available in 25 kg paper sacks.

STORAGE

Mapetherm AR1 GG may be stored for 12 months in its original packaging in a dry place.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.co.uk.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)			
PRODUCT IDENTITY			
Consistency:		powder	
Colour:		grey or white	
APPLICATION DATA (at +23°C - 50% R.H.)			
Mixing ratio (%):		100 parts of Mapetherm ARI GG with 24-26 parts by weight of water	
Consistency of mix:		thick paste	
Density of mix (g/cm³):		approx. 1.55 – 1.75	
Application temperature range:		from +5°C a +40°C	
pH of the mix:		13	
Pot life:		3 hours	
Open time:		20 minutes	
Adjustment time:		40 minutes	
Waiting time before finishing:		minimum 3-4 days depending on RH values	
FINAL PERFORMANCE			
Modulus of elasticity (N/mm²):		5,500	
Flexural strength after 28 days (N/mm²):		approx. 3.0	
In service temperature:		from -30°C to +90°C	
PERFORMANCE CHARACTERISTICS ACCORDING TO EN 998-1			
Performance characteristic	Test method	Grey	White
Dry bulk density (kg/m³):	EN 1015-10	1,200	1,273
Range of compressive strength at 28 days:	EN 1015-11	≥ 6 N/mm ² Category CS IV	≥ 6 N/mm ² Category CS IV
Adhesion (concrete) (N/mm²):	EN 1015-12	≥ 1 failure pattern (FP) = B	≥ 1 failure pattern (FP) = B
Capillary water absorption:	EN 1015-18	Category W2	Category W2
Water vapour permeability:	EN 1015-19	μ ≤ 15	μ ≤ 15

Thermal conductivity:	EN 1745	0,32 W/mK (tab.mean value; P = 50%)	0,32 W/mK (tab.mean value; P = 50%)
Reaction to fire:	EN 13501-1	Euroclass A1	Euroclass A1



Work on a EWI housing project using Mapetherm ARI GG



Work on a EWI housing project using Mapetherm ARI GG

N.B.

Whilst we try to ensure that any advice, recommendations or information given in our literature is accurate and correct, we have no control over the circumstances in which our product is used. It is therefore important that the end users satisfy themselves that the product and conditions are suitable for the envisaged application.

No warranty can be given, or responsibility accepted other than, that the product supplied by us will meet our written specification. End users should ensure that our latest product data and safety information sheets have been consulted prior to use.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.co.uk

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