

Ultramastic 2



Ready-to-use, high performance adhesive with no vertical slip, for fixing ceramic tiles on walls



CLASSIFICATION ACCORDING TO EN 12004

Ultramastic 2 is a D2T-class adhesive in water dispersion (D), improved (2) with no vertical slip (T).

Conformity of **Ultramastic 2** is declared in **ITT certificate n° 25070251/Gi (TUM)** issued by the *Technische Universität München* laboratory (Germany).

WHERE TO USE

- Bonding tiles and all types of mosaic on internal walls.
- Bonding thermal insulation and soundproofing panels

on

all types of substrates normally used in the building industry.

Particularly suitable for flexible, non-metallic surfaces.

Some application examples

Tiles on:

- bathroom and shower-room walls;
- wooden surfaces (if moisture stable for example well-anchored marine plywood);
- cementitious render and substrates;
- concrete walls made using precast panels or cast directly on site;

- gypsum plaster and precast panels;
- gypsum panels-boards;
- painted walls (if the paintwork is stable and the tiles are absorbent);
- mounting insulating panels on render.

TECHNICAL CHARACTERISTICS

Ultramastic 2 represents a new concept in dispersion adhesive made using special acrylic resins, graded mineral fillers or aggregates and admixtures.

Ultramastic 2 is ready to use, and is supplied as a white paste which is easy to apply by trowel.

Ultramastic 2 sets as the water evaporates achieving high flexibility and excellent bond strength which resists vibration and deformation of building materials.

Once completely hardened, **Ultramastic 2** has excellent performance characteristics. Therefore, before putting surfaces in bathrooms and shower-rooms into service, wait until the adhesive is completely dry. This product resists temperatures up to +90°C.

RECOMMENDATIONS

Ultramastic 2 is not suitable for fixing tiles subject to permanent immersion (swimming pools, tanks, etc.) or on substrates subject to rising damp.

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Do not use **Ultramastic 2**:

- for laying non-absorbent tiles on non-absorbent substrates;
- on metallic substrates or on wooden substrates which are not stable in the presence of humidity;
- if the substrate is not dry, or if there is continuous rising damp;
- for fixing natural stone, especially limestone (e.g. Carrara marble) and if light coloured.

Avoid fixing in very cold weather or when there is a high level of humidity.

APPLICATION PROCEDURE

Preparation of the substrate

Ultramastic 2 may be applied on all kinds of substrates which are strong and without contamination, dust, oil, grease, wax, flaky portions and loose parts.

Cementitious substrates where

Ultramastic 2 is used for fixing must be dry (approximately 1 week of curing per centimetre of thickness) and must not be subject to rising damp.

Ultramastic 2 may be used on gypsum or similar materials without applying a primer, as long as it is dry and solid.

Ultramastic 2 may be used to lay absorbent ceramic tiles on walls painted with gloss, waterproof paint and temper, as long as they are well-bonded to the render, have a sound surface and are perfectly clean.

Spreading the mix

Apply **Ultramastic 2** to the substrate using a suitable notched trowel.

Choose the trowel according to the flatness of the substrate, the size of the tiles and the type of tile backing. At least 60% of the substrate must be covered with adhesive.

- For mosaic tiles up to 5x5 cm, use a No. 4 MAPEI trowel (consumption 1.5 kg/m²).
- For normal ceramic tiles, use a No. 5 MAPEI trowel (consumption 2.5 kg/m²).
- On uneven surfaces or on tiles with a highly ridged back, use a No. 6 MAPEI trowel (consumption approximately 4 kg/m²).

The open time of **Ultramastic 2** is approximately 20 to 25 minutes in normal conditions of temperature and humidity. The tiles must be applied within this period, and the open time must be taken into consideration when spreading the adhesive. If a surface skin forms on the adhesive, it must be removed and then fresh material applied. Do not apply **Ultramastic 2** if the temperature is lower than +5°C.

Laying tiles

The tiles must not be wet before fixing, although they may be dipped in water to

clean them if they are particularly dusty. Allow to dry. Apply tiles using normal techniques, pressing them down firmly to ensure that they come into contact with the adhesive. Once applied, they do not tend to slip. Final adjustment must be carried out within 35 to 40 minutes, dependent on the absorption of the tiles and the environmental conditions.

Tiles applied with **Ultramastic 2** must not be subject to washing or exposed to rain until it is perfectly dry (approximately 7 days after laying).

Bonding insulating panels

Apply **Ultramastic 2** using a suitable notched trowel. Apply the panels by covering the entire laying surface with adhesive, or by spot bonding.

Apply the finishing materials, pressing them down firmly, and taking into consideration the open time of the adhesive.

GROUTING AND SEALING JOINTS

Tile joints are normally grouted with **Keracolor FF** or **Keracolor GG**, dependent on their size, or with **Ultracolor Plus** (please refer to the colour chart for coloured tile joints).

If the joints need to be highly resistant to chemicals, use **Kerapoxy** two-component, acid-resistant epoxy grout.

If flexible expansion joints need to be included, use **Mapesil AC** or **Mapesil LM** single component silicone sealants, or **Mapeflex AC4** (single) component acrylic sealant.

In all such cases, the size of the joints must be made so they can be properly filled and/or according to the flexibility required.

READY FOR USE

Surfaces may be put into service after approximately 7 days, according to the absorbency of the substrate and the surrounding temperature and relative humidity on site.

Cleaning

Ultramastic 2 may be cleaned from tiles with a damp sponge while it is still fresh. Tools and hands may be easily cleaned with water while the adhesive is still fresh. Once dry, it must be removed with benzene, acetone, trielina or **Pulicol 2000**, or by mechanical means.

CONSUMPTION

Bonding ceramics:

Mosaic 1.5 kg/m²
(No. 4 trowel)

15x15 cm tiles on normal render 2.5 kg/m²
(No. 5 trowel)

15x15 cm tiles on gypsum or very smooth surfaces 1.8 kg/m²
(No. 4 trowel)

TECHNICAL DATA (typical values)

Conforms to the following standards:

- European EN 12004 (D2T)
- ISO 13007-1 (D2T)

PRODUCT IDENTITY

Consistency: thick paste

Colour: white

Density (g/cm³): 1.80

pH: 8.5-9

Dry solids content (%): 83

Brookfield viscosity (mPa·s): 1.000

APPLICATION DATA

Application temperature range: from +5°C to +35°C

Open time (EN 1346): 30 minutes

Adjustment time: 35-40 minutes

Waiting time before grouting tiles: 12-24 hours

Ready for use: approximately 7 days, according to the absorption of the substrate and the surrounding temperature and humidity

FINAL PERFORMANCE

a) Bond strength according to EN 1324 (N/mm²)
- initial: > 3
- after application of heat source: > 3
- after immersion in water: > 0.5
- at high temperatures: > 2

b) According to European directive UEAtc (N/mm²)
- 28 days at +23°C - 50% R.H.: 2.5-3

Resistance to humidity: excellent

Resistance to ageing: excellent

Resistance to solvents and oils: poor

Resistance to acids and alkalis: poor

In-service temperature range: from -20°C to +90°C

Deformability: deformable

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15x15 cm or 20x20 cm
floor tiles 3.5-4 kg/m²
(No. 5 or 6 trowel)

Bonding insulating material

Tack-bonding foam 0.5-0.8 kg/m²

Bonding expanded
cement elements, etc. 1.5 kg/m²

Complete bonding on
rough surfaces 2.5 kg/m²

PACKAGING

Ultramastic 2 is supplied in 16 kg plastic drums.

STORAGE

24 months in its original packaging.
Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Ultramastic 2 is not considered as dangerous according to the current regulation regarding the classification of mixtures. We recommend the use of protective gloves and goggles and to take the usual precautions for handling chemical products.

For further and complete information about the safe use of our product please refer to the

latest version of our Material Safety Data Sheet.

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

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



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