MAPEI

Ultramastic 5

CE
EN 12004



High-performance, ready-to-use paste adhesive with no vertical slip, long open time and long adjustment time, particularly suitable for laying tiles on absorbent substrates

CLASSIFICATION ACCORDING TO EN 12004

Ultramastic 5 is a D2TE-class adhesive in dispersion (D), improved (2), slip-resistant (T) with a long open time (E).

*Conformity of **Ultramastic 5** is declared in **ITT** certificate **No. 25080253/Gi (TUM)** issued by the Technische Universität München laboratory (Germany).*

WHERE TO USE

- Bonding heavy and large format tiles on walls.
- Bonding all types of tiles and mosaic on internal walls, floors and ceilings, particularly where long adjustment times are required.
- Bonding all types of tiles and mosaic on external walls.
- Bonding thermal insulation and soundproofing panels, decorative ceiling elements and expanded cement blocks

on

all types of substrate normally used in the building industry.

Particularly suitable for non-metallic absorbent, elastic, deformable substrates.

Some application examples

Absorbent and not absorbent tiles (such as porcelain tiles) on:

- bathroom and shower-room walls and floors;
- wooden surfaces (if moisture stable, for example well-anchored marine plywood);
- waterproofing membranes such as **Mapegum WPS**;
- walls made using cellular concrete blocks;
- particularly absorbent substrates;
- 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);
- old tiles (as long as one of the two surfaces is absorbent);
- large-sized tiles on walls and floors;
- mounting insulating panels on render/plaster;
- tiles on heated substrates.

TECHNICAL CHARACTERISTICS

Ultramastic 5 represents a new concept in water dispersion adhesives, made using special acrylic resins, graded mineral aggregates and admixtures.

Ultramastic 5



Application of primer on a substrate made from lightweight concrete blocks



Spreading Ultramastic 5 on a substrate

Ultramastic 5 is a ready to use, white paste.

This product has a long adjustment time, which makes it particularly suitable for its use on absorbent tiles and for laying during hot weather.

The open time is 30 minutes (at +23°C and 50% relative humidity), which allows ample time for installation. When tiles are fixed (even if large sized), they bond immediately without slipping, thanks to its excellent thixotropic properties.

Ultramastic 5 sets as the water evaporates achieving high flexibility and excellent bond strength, which resists vibration and deformation of building materials.

Once completely hardened, **Ultramastic 5** has excellent performance characteristics. Therefore, before putting floors into service, wait until the adhesive is completely dry, both when laying in bathrooms and shower-rooms, and when laying outdoors (in the latter case, walls must be protected from rain).
Excellent resistance to temperatures up to +90°C.

RECOMMENDATIONS

Ultramastic 5 is not suitable for bonding tiles subject to permanent immersion (swimming pools, tanks, etc.) or on substrates subject to rising damp.

Do not use **Ultramastic 5**:

- for fixing 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 laying natural stone, especially limestone (e.g. Carrara marble) and if light coloured.

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

APPLICATION PROCEDURE

Preparation of the substrate

Ultramastic 5 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 5** is used, must be dry (approximately 1 week of curing per centimetre of thickness) and must not be subject to rising damp.

Ultramastic 5 may be used on gypsum or similar materials without applying a primer, as long as it is dry and solid.

Ultramastic 5 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 5** on 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. When fixing to indoor surfaces, at least 60% of the back of the tile must be buttered, while when fixing outdoors, the entire back surface of the tile must be covered with adhesive
.

- For mosaic tiles up to 5x5 cm, use a No. 4 MAPEI trowel (consumption 1.5 kg/m^2).
- For normal ceramic tiles, use a No. 5 MAPEI trowel (consumption 2.5 kg/m^2).
- On uneven surfaces, for large format tiles or on tiles with a very ridged back, use a No. 6-8 MAPEI trowel (consumption approximately 4 kg/m^2).

The open time of **Ultramastic 5** is approximately 30 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 fresh material applied.
Do not apply **Ultramastic 5** if the temperature is lower than +5°C.

When fixing outdoors, do not apply during those times of the year where quick drying of the cement can not be guaranteed (several days), and never just before the onset of frost.

Installing tiles

The tiles must not be wet before laying, although they may be dipped in water to clean them if they are particularly dusty.
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 of the tiles must be carried out within 50 minutes, dependent on the absorption of the tiles and the environmental conditions.
Tiles applied with **Ultramastic 5** must not be subject to washing or exposed to rain until it is perfectly dry (approximately 7 days after laying).

Bonding insulating material

Apply **Ultramastic 5** using a 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, anti-acid epoxy grout.

TECHNICAL DATA (typical values) Conforms to the following standards:	– European EN 12004 (D2TE)
PRODUCT IDENTITY	
Consistency:	thick paste
Colour:	white
Density (g/cm³):	1.6
pH:	8.5
Dry solids content (%):	80
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:	up to 50 minutes, depedent on the absorption of the tiles and the environmental conditions
Waiting time before grouting tiles:	12-24 hours
Ready for use:	approximately 7 days, dependent on the absorption of the substrate and the surrounding temperature and humidity
FINAL PERFORMANCE	
a) Bond strength according to EN 1324 (N/mm²) **– initial:** **– after application of heat source:** **– after immersion in water:** **– at high temperatures:**	 > 2 > 3 > 0.5 > 2
b) According to European directive UEAtc (N/mm²) **– 28 days at +23°C - 50% R.H.:**	3.2
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:	highly deformable



Fixing large-sized tiles on lightweight concrete blocks

Ultramastic 5



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 dependent on the flexibility required.

READY FOR USE

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

Cleaning

Ultramastic 5 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/m^2 (No. 4 trowel)
15x15 cm tiles on normal render:	2.5 kg/m^2 (No. 5 trowel)
15x15 cm tiles on gypsum or very smooth surfaces:	1.8 kg/m^2 (No. 4 trowel)
15x15 cm or 20x20 cm floor tiles:	3.5-4 kg/m^2 (No. 5 or 6 trowel)
30x40 cm tiles on cellular concrete blocks:	4 kg/m^2 (8x8 cm trowel)

Bonding insulating material:

Tack-bonding foam:	0.5-0.8 kg/m^2
Bonding elements expanded cement, etc.:	1.5 kg/m^2
Complete bonding on rough surfaces:	2.5 kg/m^2

PACKAGING

Ultramastic 5 is supplied in 16 kg plastic drums.

STORAGE

24 months in its original packaging. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Ultramastic 5 is not considered hazardous according to current standards and guidelines regarding the classification of mixtures. However, we recommend taking 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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