

# ULTRABOND MS RAPID

Rapid-setting assembly adhesive for internal and external use with a high initial tack



## WHERE TO USE

**Ultrabond MS Rapid** is a one-component, deformable, thixotropic adhesive with a high modulus of elasticity made from sililated polymers, characterised by its high initial tack ("sucker effect") and rapid final hardening. It is recommended, therefore, for those bonds where a strong initial tack and high mechanical strength are required after a short curing time.

Its rapid polymerisation and compatibility with most absorbent and non-absorbent building materials, including damp ones, make **Ultrabond MS Rapid** a practical, easy to apply product to replace or integrate traditional mechanical fasteners when constructing and assembling components and fittings used in the building and industrial sector.

Suitable for bonding internal and external window ledges, balconies, stone sills, skirting, parquet, wooden and plastic cable trunking, insulating and soundproofing panels, pantile roofing tiles, dressings around doors and walls, panelling and prefabricated elements.

Specifically recommended for bonding **Idrostop Soft** hydro-expansive bentonite jointing strip for waterproofing second pours and for sealing through elements in concrete.

### Some application examples

Recommended for bonding and assembling a wide range of materials including:

- cement and cement-based materials;
- bricks;
- stone;
- wood and wood-derived materials;
- metals;
- painted surfaces in general;
- ceramics;
- glass;
- rigid and flexible plastics\*;
- **Idrostop Soft** hydro-expansive bentonite jointing strip.

\* Contact MAPEI Technical Services Department prior to use.

## ADVANTAGES

- Deformable assembly adhesive
- Bonds all types of building materials, internally and externally
- Compatible with wet surfaces
- High initial tack, rapid-setting, high final strength
- Easy to extrude and no stringing
- Very low emission of volatile organic compounds

## TECHNICAL CHARACTERISTICS

**Ultrabond MS Rapid** is a highly viscous, highly thixotropic adhesive made from silitated polymers, therefore with no silicone and isocyanates, developed in MAPEI Research & Development laboratories.

Compared to polyurethane products, **Ultrabond MS Rapid** guarantees:

- compatibility also with damp substrates;
- easier extrusion, particularly at low surrounding temperatures;
- more rapid surface hardening;
- longer shelf life;
- use of traditional plastic cartridges.

Compared to neutral silicone products, **Ultrabond MS Rapid** offers:

- better adhesion to compact and/or absorbent building materials;
- higher initial "sucker effect";
- no "stringing" after extrusion;
- higher tensile and shear strength;
- the possibility to be painted over with the most common elastomeric paints;
- no contamination by plasticisers migrating into the substrate.

Thanks to its creamy consistency, fresh **Ultrabond MS Rapid** is able to compensate for differences in flatness between the two components bonded together.

**Ultrabond MS Rapid** contains no solvents, does not give off unpleasant smells and has very low emissions of volatile organic compounds, and is certified, therefore, as EC1 Plus.

**Ultrabond MS Rapid** hardens and polymerises by reacting with the humidity in the air or substrate, and without giving off liquid or gaseous substances potentially hazardous for users or for the environment. No hazard warning labels, therefore, are required on the packaging.

The product is ready to use and is available in plastic cartridges for traditional extrusion guns.

## RECOMMENDATIONS

- Do not apply on dusty or crumbly surfaces.
- Do not apply on wet surfaces or surfaces suffering from continuous rising damp.
- Do not use on surfaces with traces of oil, grease or form-release agent.
- Do not apply on bituminous substrates.
- Do not apply **Ultrabond MS Rapid** if the temperature is lower than +5°C.
- Bond elements and components immediately after extruding the adhesive without waiting.
- Do not contaminate fresh adhesive with alcohol-based solvents.

## APPLICATION PROCEDURE

### Preparation of the surface to be bonded

All the surfaces to be bonded must be dry or slightly damp, solid and free of dust, loose portions, oil, grease, wax and old paintwork.

**Ultrabond MS Rapid** adheres well to most building materials and does not need a primer.

In certain cases, or in particularly severe service conditions, a coat of **Primer FD** will help **Ultrabond MS Rapid** adhere to absorbent substrates.

Degrease the surface of non-absorbent substrates with a clean rag dipped in **Cleaner L** or acetone, then wait until the solvent has completely evaporated before extruding the adhesive.

On plastic substrates, we recommend roughing the surface with fine abrasive paper and then applying a coat of **Primer P**. Since there are many different types of plastic, it is recommended to carry out preliminary tests on a small area, to verify the product's reaction.

If primer is applied, wait until it is completely dry before extruding **Ultrabond MS Rapid**.

If in doubt, contact MAPEI Technical Services Department for the most appropriate advice.

### Preparation and application of Ultrabond MS Rapid

Insert the cartridge in an extrusion **Mapei Gun**, cut the head off the cartridge, screw the pre-cut extrusion nozzle to the cartridge and extrude a continuous bead of adhesive.

In case the soft cartridge is used, insert it in the suitable extrusion **Mapei Gun**, cut the head of the cartridge, screw the extrusion nozzle to the threaded collar of the gun and then extrude the product.

To bond small components, extrude beads or spots of adhesive on one of the two surfaces. Join the two components and press firmly together to spread the adhesive evenly on the back.

When bonding over a large surface area, extract a series of parallel beads around 10-15 cm apart. Join the two components and press firmly together to spread the adhesive evenly on the back.

Carry out any adjustment in the position of the component within 5 minutes at +23°C.

**Ultrabond MS Rapid** is a rapid-hardening adhesive. If necessary, to further accelerate complete polymerisation of the adhesive, dampen the substrate by spraying on water just before applying the adhesive. In such cases, never let drops or puddles of water form on the surface.

The adhesive starts to harden after 1.30 hours at +23°C (and after 25 minutes if water is sprayed on the surface).

Final hardening takes place after 24 hours at +23°C for layers up to 3.5 mm thick.

**Ultrabond MS Rapid** has a high initial "sucker effect", which means it can support even heavy loads on walls and ceilings straight away.

However, when bonding heavy objects on vertical surfaces or ceilings, or objects subjected to vibrations or deformation immediately after bonding, it is advisable to use **Ultrabond MS Rapid** combined with double-sided tape (up to 3 mm) to

help increase its initial slip resistance. In such cases, once bonded, the position of the object cannot be adjusted. Apply the adhesive in layers no more than 2-3 mm thick.

## CONSUMPTION

According to the bonding technique used (spot bonding or in beads).

A 290 ml cartridge forms a bead of adhesive with a 10 mm base x 10 mm high triangular section around 5 metres long.

## CLEANING

**Ultrabond MS Rapid** may be removed from surfaces, tools and clothing with **Cleaner L** or acetone before it hardens; once hardened, it must be removed mechanically or with **Pulicol 2000**. Make sure all traces of detergent have completely evaporated from the substrate before applying the adhesive.

## PACKAGING

290 ml cartridges in 12 pcs boxes.

600 ml soft cartridges in 20 pcs boxes.

## COLOURS

**Ultrabond MS Rapid** is available in white.

## STORAGE

**Ultrabond MS Rapid** 290 ml cartridges may be stored for up to 18 months in a cool, dry place, while 600 ml soft cartridges may be stored for up to 12 months.

## 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.com](http://www.mapei.com).

PRODUCT FOR PROFESSIONAL USE.

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

Appearance:	thixotropic paste
Colour:	white
Density:	1.45 ± 0.03 g/cm <sup>3</sup>
Dry solids content (%):	100
Helipath viscosity:	approx. 5,500,000 (spindle F - 1 rpm)
EMICODE:	EC1 Plus - very low emission

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

Application temperature range:	from +5°C to +35°C
Dust dry:	15' at +23°C and 50% R.H.

Adjustment time:	5'
Initial hardening time:	1.30 h (25' if substrate is damp)
Complete hardening:	3.5 mm/24 h - 4.5 mm/48 h

## FINAL PERFORMANCE

Initial sucker effect (according to MAPEI test procedure):	25 N
Final tensile strength (according to EN 1348): – after 7 days at +23°C:	4 N/mm <sup>2</sup>
Final shear strength (according to EN 12004): – after 7 days at +23°C:	4 N/mm <sup>2</sup>
Tear strength (according to ISO 34/1): – after 7 days at +23°C:	16 N/mm
Shore A hardness (DIN 53505):	75 ± 5
Elongation at failure (according to DIN 53504 S3a): – after 7 days at +23°C:	180%
Resistance to UV rays:	good
In-service temperature range:	from -40°C to +90°C

## 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](http://www.mapei.com)

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431-7-2022-gb

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