



Mapesil LM

Neutral silicone sealant for stone and marble



WHERE TO USE

Mapesil LM is a solvent-free sealant with a low modulus of elasticity specifically formulated for sealing materials sensitive to acids and plasticising agents, marble, granite, sandstone and quartz thanks to its chemical nature which deters surface bleeding or the migration of plasticising agents which would otherwise stain the substrate.

In fact, the chemical characteristics of the product also make it perfectly suitable for particularly delicate materials such as mirrors, bricks, cellular concrete and varnished or enamelled wood.

Mapesil LM generally forms an excellent bond on non-absorbent substrates too, such as glass, ceramic, clinker, enamelled surfaces, water and solvent-based varnish, metals in general and on various types of plastic.

It is also suitable for contact with absorbent mineral substrates such as concrete, render and fibre-cement. This product generally forms a good bond on the above substrates even if a primer is not applied beforehand (contact the MAPEI Technical Assistance Department). Thanks to the low modulus of elasticity of **Mapesil LM**, it is suitable for sealing internal and external fillet and expansion joints, including those subject to high movements when in service, between:

- pre-fabricated panels;
- window/door fittings and wall surrounds;
- pipe-work and vertical walls;

- similar and/or different types of coating materials.

It is also suitable for sealing joints in floors with limited pedestrian traffic.

TECHNICAL CHARACTERISTICS

Mapesil LM is a one-component, solvent-free, neutral-reticulation silicone sealant which does not emit unpleasant odours, available in the form of a thixotropic paste. It is easy to apply on vertical and horizontal surfaces and reticulates at room temperature through the humidity present in the air to form a flexible sealant.

Seals made using **Mapesil LM** are extremely stable over time, even when exposed to inclement weather, industrial environments, temperature variations or water. The product remains flexible over a temperature range of between -40°C and $+150^{\circ}\text{C}$.

Mapesil LM generally offers good resistance to chemical agents. However, because of the wide range of products and service conditions, if in doubt carry out preliminary tests beforehand.

Mapesil LM bonds perfectly to most types of substrate used in the building industry without applying a primer beforehand (glass, ceramic, aluminium, zinc-plated sheet metal, concrete, stainless steel and PVC).

Primer FD must be applied beforehand in the case of prolonged immersion in water.

If in doubt, please contact the MAPEI Technical Assistance Department or carry out preliminary tests beforehand.

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Mapesil LM is particularly suitable for surfaces sensitive to acids on which conventional neutral or acid sealants normally provoke changes in colour or staining of the substrate (e.g. stone, mirrors, etc.).

RECOMMENDATIONS

- Do not apply **Mapesil LM** on rubber, heavily-plasticised plastics or bitumen. The oil and plasticising agents in the substrate may migrate to the surface and compromise the bond or penetrate into the sealant leading to a variation in colour and mechanical characteristics.
- Do not use **Mapesil LM** for sealing floors subject to intense traffic (use **Mapeflex PU45**, **Mapeflex PU20** or **Mapeflex PU21**).

APPLICATION PROCEDURE

Surfaces to be sealed must be solid with no dust or loose parts and free of all traces of oil, grease, wax, old paintwork and rust. In order to perform correctly, the sealant must be able to expand and contract freely once it has been applied in the joint.

It is important, therefore, that:

- it only bonds perfectly to the side walls of the joint and not to the bottom;
- the width of the joint is calculated correctly so that the product does not expand more than 25% of the initial width of the joint when in service;
- the thickness of the **Mapesil LM** seal is always less or, at most, equal to the width of the joint.

Also, to protect the substrate from staining, apply masking tape along the edges of the joint before extruding the **Mapesil LM**.

Regulate the depth of the joint to avoid **Mapesil LM** sticking to the bottom by inserting **Mapefoam** polystyrene foam cord in the joint.

Application of primer FD

If a coat of **Primer FD** is required, apply the product with a small brush where required, leave it to dry for a few minutes so that the solvent evaporates off and then apply the **Mapesil LM**.

Application of Mapesil LM

Mapesil LM is available in 310 ml cartridges. Cut off the tip of the cartridge near the thread and screw on the nozzle. Trim the tip of the nozzle at 45° according to the width of joint required and insert the cartridge into a suitable extrusion gun.

Finish off the surface of the **Mapesil LM** with a suitable damp tool or a tool dipped in soapy water before the skin forms on the surface.

For further information, please refer to the Safety Data Sheet available upon request.

Reticulation

When **Mapesil LM** is exposed to the air, the surrounding humidity sets off the reticulation reaction and the sealant becomes flexible.

The surrounding temperature only has a small impact on the reticulation rate of **Mapesil LM**, while the level of humidity in the surrounding air has the most influence. We highly recommend that the product is never applied if the temperature is below 0°C.

Cleaning

Traces of partially reticulated **Mapesil LM** may be removed from tools and the surface of the substrate with common solvents such as ethyl acetate, benzene or toluene. Once the product has completely reticulated, the silicone rubber may only be removed mechanically.

PACKAGING

Mapesil LM is available in 310 ml cartridges in white (100), grey (110), white (112), anthracite (114), black (120), beige (132) and transparent in display boxes containing 12 cartridges.

STORAGE

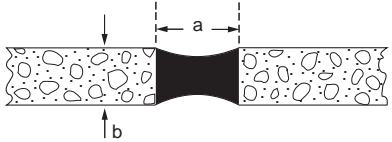
Mapesil LM cartridges may be stored for up to 18 months in a dry, cool area.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapesil LM is not considered as dangerous according to the European regulation

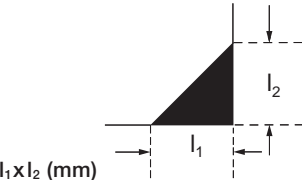
CONSUMPTION TABLE (metres of product per cartridge)

EXPANSION JOINT



Size of joint in mm (axb)	Metres of product per cartridge
5x5	12
5x10	6
10x10	3
15x10	2
20x10	1.5
25x10	1.25
30x15	0.7
40x20	0.4

BUT JOINT



Size of joint in mm (l ₁ x l ₂)	Linear metres per cartridge
5	25
10	6
15	3
20	1.5



Sealing an external stone dressing



Sealing an internal stone dressing

TECHNICAL DATA (typical values)

Conforms to the following standards:

- DIN 18545-2 class E
- DIN 18540
- ISO 11600-F class 25 LM
- ISO 11600-G class 25 LM
- ASTM C 920 class 25
- TT-S-00230 C class A
- TT-S-001543 A class A
- ASTM C 1248
- BS 5889 type A

PRODUCT IDENTITY

Consistency:	thixotropic paste
Colour:	white (100), grey (110), grey (112), anthracite (114), black (120), beige (132) and transparent
Density ISO 1183 Met. B (g/cm ³):	1.02
Dry solids content (%):	100
Storage:	18 months in its original cartridges in a cool, dry place
Hazard classification according to EC 1999/45:	none. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet
Customs class:	3214 90 00

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

Application temperature range:	from +5°C to +40°C
Extraction rate from a 3.5 mm nozzle at a pressure of 0.5 MPa (ml/min.):	50-70
Time to form surface skin:	15 minutes
Reticulation rate from outside to the inside (mm): - 1 day: - 7 days:	4 10

FINAL PERFORMANCE

Tensile strength according to DIN 53504 53A (N/mm ²):	1.0
Elongation at failure according to DIN 53504 53A (%):	250
Tear resistance (ISO 34) (N/mm):	4
Shore A hardness (DIN 53505):	21
Modulus of elongation according to ISO 8339 - Method A at 100% elongation (N/mm ²):	0.35
Maximum permitted movement in service (%):	25
Resistance to water:	excellent
Resistance to ageing:	excellent
Resistance to atmospheric agents:	excellent
Resistance to chemical agents, acids and diluted alkalis:	good
Resistance to soap and detergents:	excellent
Resistance to solvents:	limited
Resistance to temperatures:	from -40°C to +150°C

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regarding the classification of mixtures. It is however recommended to use gloves, eyes protection and to take the usual precaution taken when handling chemical products are recommended. For further, more complete information on how to use the product safely, we recommend consulting the latest version of the Safety Data Sheet.

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, anybody who intends using the product must ensure beforehand that it is suitable for the envisaged application. In all cases, the user alone is fully responsible for any consequences deriving from the use of this product.

Always refer to the latest, updated version of the Technical Data Sheet available on the company website www.mapei.com

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

(GB) A.G. BETA

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Sealing a façade joint with Mapesil LM

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