MAPEI

Bio Block

Mapesil AC

CE EN 15651-1 CE EN 15651-2 CE EN 15651-3

GEV-EMICODE EC 1 PLUS very low emission

Pure, mould-resistant, acetic, silicone sealant available in 34 colours and transparent



WHERE TO USE

Mapesil AC is an acetic-crosslinking silicone sealant suitable for sealing glass, ceramic and anodised aluminium. After first having used a bonding enhancer, **Primer FD** can also be used on concrete, wood, metal, painted surfaces, plastic and rubber.

Mapesil AC is used for:
- Sealing expansion joints of ± 25% expansion of the initial size.
- Forming a perfectly elastic gasket between different elements in building, mechanical engineering, ship-building, automobile, manufacturing, etc.

Some application examples

- Sealing joints in wall and floor coverings of ceramic and cement, provided they are not subject to heavy abrasion.
- Sealing joints between sinks or sanitary ware and ceramic tiles in kitchens, bathrooms and showers with colours coordinated with the grouts.
- Sealing expansion joints in swimming pools.
- Assembling compositions of glass tiles and artistic stained glass windows.
- Sealing glazing of door and window frames.
- Sealing air ducts, water pipes.
- Sealing portholes, windows, glazed frames.
- Sealing tanks, service pipes and boilers.
- Sealing materials of different thermal exposure coefficient.
- Adhesive and sealant for general use.

TECHNICAL CHARACTERISTICS

Mapesil AC is a one-component, acetic crosslinking, solvent-free silicone sealant, available coloured or transparent. It is a thixotropic paste which is easily trowellable both horizontally and vertically. It crosslinks following exposure to atmospheric humidity at ambient temperatures, and forms an elastic product with following properties:

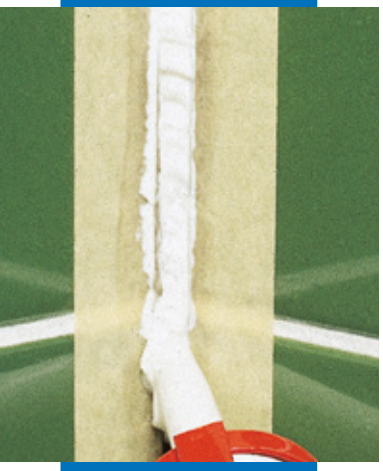
Mapesil AC



Cutting the nozzle according to the size of the joints



Application of Primer FD



Application of Mapesil AC

- excellent durability. Seals remain unchanged even after many years exposure to climatic extremes, industrial pollution, sudden temperature changes and immersion in water;
- high elasticity;
- excellent bonding to glass, ceramic and anodised aluminium;
- mildew resistant;
- waterproof and permeable to vapour;
- resistant to chemical agents;
- flexible down to -40°C and resistant to temperatures at +180°C;
- easily workable;
- in compliance with ISO 11600 norm, it is classified as F-25-LM.
- in compliance with numerous international standards.
- in compliance with EN 15651-1, EN 15651-2, EN 15651-3 and CE-marking.

RECOMMENDATIONS

- Do not use **Mapesil AC** for joints in exterior between ceramic tiles and light-coloured natural stone because dirt could accumulate by the joints. Use **Mapesil LM.**
- For sealing surfaces sensitive to acids such as lime stone, use a neutral silicone sealant (e.g. **Mapesil LM**).
- The use of **Mapesil AC** is not recommended on highly plasticised material or on bituminous surfaces because of the release of substances that reduce bonding and penetrate into the sealant, altering the colour and resistance.
- The resistance of **Mapesil AC** to chemical agents is generally excellent; however, due to the numerous products and working conditions to which **Mapesil AC** can be applied, it is always advisable to do a sample test in cases of doubt.
- Do not use **Mapesil AC** to seal aquariums.
- For sealing floor joints subject to heavy traffic, use a polyurethane (e.g. **Mapeflex PU 45 FT**) or epoxy-polyurethane (e.g. **Mapeflex PU20**) sealant.

APPLICATION PROCEDURE

Preparing and calculating joints size

All the surfaces to receive the sealant must be dry, solid and free from dust and loose particles, oils, grease, wax, old paint and rust.
In order that the seal can carry out its function, provision must be made for it to elongate and compress freely.
During application it is therefore necessary that:

- it adheres only to the side of the walls of the joint and not to the base of the joint;
- the joint is sized so that the estimated maximum extension is not greater than 25% of the initial width (calculated at +20°C);
- when the width of the joint is 10 mm, the thickness must be equal to the width; for widths between 11 and 20 mm the thickness must always be equal to 10 mm; for widths greater than the thickness must be equal to half the width.

To control the depth of the joint and to prevent **Mapesil AC** from adhering to the base, the bottom of the joint should be filled with a sized **Mapefoam**, a polyethylene cord.

Application of Primer FD

Where the use of **Primer FD** is necessary, it must be applied with a small brush onto the appropriate areas of the joints and left to dry for several minutes to allow the solvent to evaporate. Then apply **Mapesil AC**.

Application of Mapesil AC

Mapesil AC is packed in cartridges of 310 ml; to use, cut the cartridge above the end of the thread and screw on the nozzle, which should be cut at 45° to produce a hole corresponding to the size of the joint. Insert the cartridge into the gun and extrude the sealant.
The surface of **Mapesil AC** must be finished off with a damp tool, preferably moistened with soapy water, before a superficial film has formed.

Crosslinking

When exposed to air and humidity, **Mapesil AC** crosslinks and becomes elastic. The speed at which **Mapesil AC** crosslinks depends only slightly on temperature, but is fundamentally linked to humidity in the atmosphere.

The graph shows the cross linking at +23°C and 50% humidity in the atmosphere.

Cleaning

To clean partially cross-linked **Mapesil AC** from tools and contaminated surfaces, common solvents may be used (e.g. ethyl acetate, petrol, toluene). Once cross-linking is complete, silicone rubber can only be cleaned mechanically.

COVERAGE

Mapesil AC:
Coverage of **Mapesil AC** varies depending on the width of the joints. Some examples of coverage for end joints and triangular joints are shown in the chart.

Primer FD:
100 g/m^2.

PACKAGING

Mapesil AC: 310 ml cartridges.

Primer FD:
0.9 kg and 0.2 kg bottles.

COLOURS

Mapesil AC is available in 34 colours from the "MAPEI COLOURED GROUTS" range plus transparent.

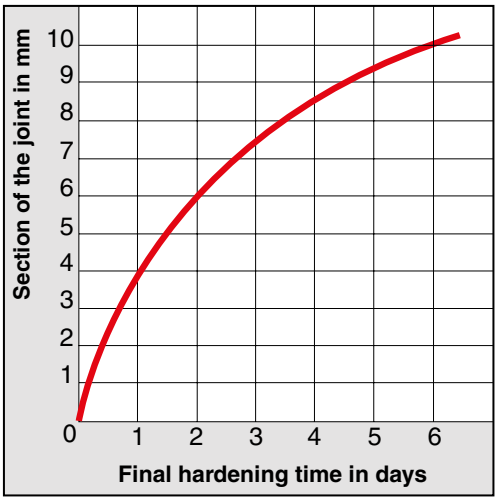
STORAGE

Mapesil AC can be stored 24 months in a dry cool place in original cartridges.
Primer FD, when stored in a cool and dry place (at a temperature not higher than +25°C) has a storage life of 6 months.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapesil AC is not considered dangerous according to current norms regarding the classification of mixtures. During use, wear protective gloves and goggles and take the usual precautions for handling chemicals.
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.



MAPESIL AC - TECHNICAL DATA (typical values)

In compliance with:	EN 15651-1 EN 15651-2 EN 15651-3
PRODUCT IDENTITY	
Type:	thixotropic paste
Colour:	transparent + 34 colours
Density (g/cm³):	1.03 (transparent colour)
Dry solids content (%):	100
EMICODE:	EC1 Plus - very low emission
APPLICATION DATA (at +23°C and 50% R.H.)	
Application temperature range:	from +5°C to +50°C
Extrusion speed from a 3.5 mm nozzle at a pressure of 0.5 N/mm² (g/minute):	120
Time for formation of skin (minutes):	10
Shrinkage during vulcanisation (%):	3.5
Speed of vulcanisation (mm):	4 in 1 day - 10 in 7 days
FINAL PERFORMANCES	
EN 15651-1: sealant for façade joints in interior and exterior, even with cold temperature:	F-EXT-INT-CC
Class:	25 LM
EN 15651-2: sealant for glazing, even with cold temperature:	G-CC
Class:	G 25 LM
EN 15651-3: sealant for sanitary fittings:	S
Class:	XS 1
Tensile strength – according to ISO 37 (N/mm²):	1.6
Elongation at breaking point – according to ISO 37 (%):	800
Tear strength (ISO 34-1, Die C) (N/mm):	4
Shore-A-Hardness (ISO 868):	20
Density at +25°C (ISO 1183-1 A) (g/cm³):	1.02
Modulus of elongation measured according to ISO 8339 METHOD A (N/mm²): **– at 25% elongation:** **– at 50% elongation:** **– at 100% elongation:**	 0.20 0.27 0.35
Maximum movement allowed (%):	25
Resistance to water:	excellent
Resistance to ageing:	excellent
Resistance to atmospheric agents:	excellent
Resistance to chemical agents, acids and dilute alkali:	good
Resistance to soap and detergents:	excellent
Resistance to solvents:	limited
Resistance to temperature:	from –40°C to +180°C

PRIMER FD - TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Consistency:	transparent liquid
Color:	yellowish
Density (g/cm³):	0.92
Brookfield viscosity (mPa·s):	1-2 (rotor 1 - rpm 100)



Smoothing the joint with soapy water and a small brush



Sealing ceramic tile floor with Mapesil AC



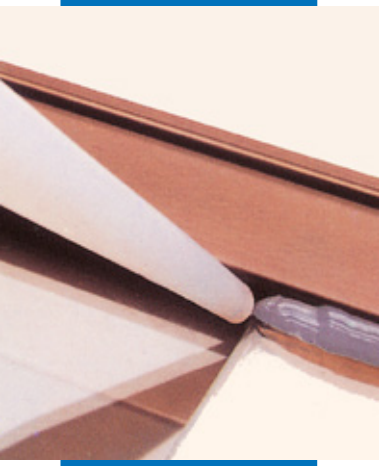
Sealing sanitary ware

Mapesil AC





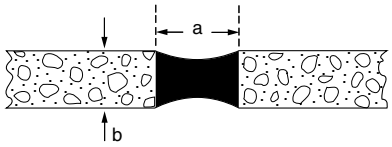
Sealing U-profile glass



Sealing aluminium window frame with Mapesil AC

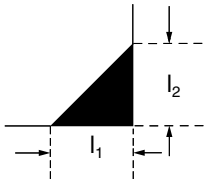
COVERAGE TABLE (linear metres per cartridge)

END JOINT



Joint size in mm (a x b)	Linear metres per cartridge
5x5	12
10x5	6
10x10	3
15x10	2
20x10	1.5
25x10	1.25
30x15	0.7
40x20	0.4

TRIANGULAR JOINT



Joint size in mm (l_1 x l_2)	Linear metres per cartridge
5x5	25
10x10	6
10x15	3
10x20	1.5

Primer FD is easily inflammable. It is recommended storing it away from naked flames and sparks, to avoid smoking, to prevent the build up of electrostatic energy and to work in well ventilated areas.
Furthermore, it is irritant for the eyes and skin, it may cause drowsiness and dizziness, it is harmful if swallowed or inhaled, and it may cause irreversible damage if used for lengthy periods.
During use, wear protective gloves to prevent dry, chapped skin, and protective gloves, and take the usual precautions for handling chemicals.
If the product comes in contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention. Wear a suitable device to protect the respiratory system. Do not use in presence of pregnant women.
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

LEGAL NOTICE
The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation. The most up-to-date TDS can be downloaded from our website www.mapei.com. ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

This symbol is used to identify Mapei products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.

Our Commitment To The Environment
MAPEI products assist Project Designers and Contractors create innovative LEED (The Leadership in Energy and Environmental Design) certified projects, in compliance with the U.S. Green Building Council.

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

	WHITE	MOON WHITE	MANHATTAN 2000	SILVER GREY	MEDIUM GREY	CEMENT GREY	RIVER GREY	MUSK GREY	LONDON GREY	ANTHRACITE	BLACK	CARIBBEAN	JASMINE	VANILLA	ALMOND	BEIGE 2000	SAND	SILK	PINK POWDER	GOLDEN DUST	LIQUORICE	MUD	CARAMEL	BROWN	TERRACOTTA	CHOCOLATE	TERRA DI SIENA	VOLCANO SAND	YELLOW	VIOLET	CROCUS BLUE	TURQUOISE	SPACE BLUE	TORNADO	TRANSPARENT
	100	103	110	111	112	113	115	116	119	114	120	137	130	131	138	132	133	134	139	135	152	136	141	142	143	144	145	149	150	162	170	171	172	174	999
Mapesil AC	●	●	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	●	●

N.B.: Due to the printing processes involved, the colours should be taken as merely indicative of the shades of the actual product

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BUILDING THE FUTURE

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