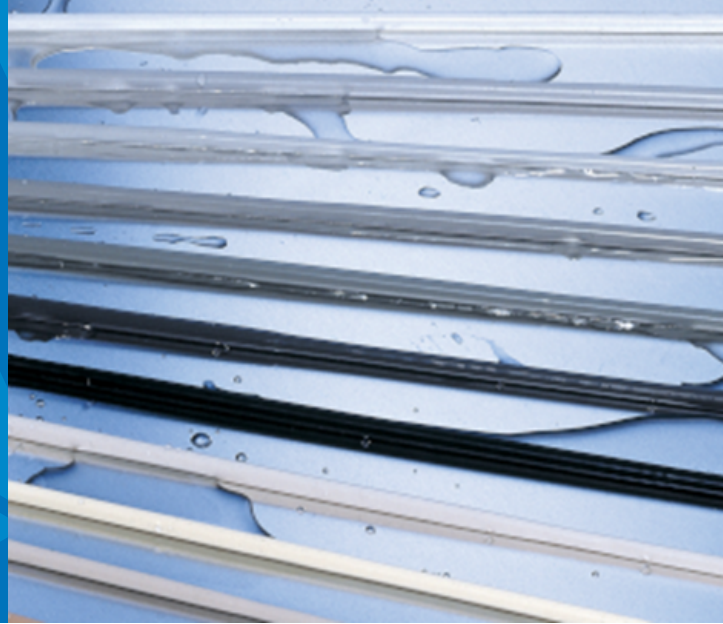


MAPESIL AC ECO

Pure, mould-resistant, acetic and solvent-free silicone sealant produced without the use of fossil resources



WHERE TO USE

Mapesil AC Eco is an acetic-crosslinking silicone sealant suitable for sealing glass, ceramic and stainless metals. When combined with the bonding enhancer **Primer FD**, it can also be used on concrete, wood, mineral substrates, plastic and rubber.

Mapesil AC Eco is used for:

- Sealing expansion, contraction and fillet joints with up to 25% expansion of the initial size, according to the standard EN 15651.
- Forming a perfectly elastic gasket between different elements in the building, mechanical engineering, manufacturing, etc.

ADVANTAGES

- Produced **without the use of fossil resources** and packed in **recycled plastic cartridges** to reduce environmental impact
- Solvent-free, with very low emission of Volatile Organic Compounds
- Certified for various applications in the Building Industry
- High elasticity in absorbing strong movement in service
- High durability, to resist over time
- Impermeable to water and gases
- Resistant to high temperatures
- Compatible with mildly acid or basic substances
- Colour range compliant with "Mapei Coloured Grouts"

TECHNICAL CHARACTERISTICS

Mapesil AC Eco is a one-component, acetic crosslinking silicone sealant. It is a thixotropic paste which is easily trowellable both horizontally and vertically. It hardens following exposure to atmospheric humidity at ambient temperatures, and forms an elastic and watertight product.

Mapesil AC Eco is easily workable both on horizontal and vertical surfaces and adheres to glass, ceramics, inox metal and many types of plastics without need for a primer (due to the great variety of plastics on the market, it is advisable to always carry out preliminary tests). If combined with **Primer FD** adhesion promoter, **Mapesil AC Eco** also bonds to mineral or absorbent building materials.

Mapesil AC Eco is CE marked according to EN 15651-1, EN 15651-2, EN 15651-3, EN 15651-4.

Furthermore, **Mapesil AC Eco** has very low emission of Volatile Organic Compounds (VOC) and is classified as EMICODE EC1 Plus according to GEV.

RECOMMENDATIONS

- If **Mapesil AC Eco** is used in exterior, light surface dirt may build up on the surfaces, though it will be easily washed off by rain. Please contact Mapei Technical Service to identify the most suitable solution.
- For sealing surfaces sensitive to acids such as limestone, use a specific neutral silicone sealant (e.g. **Mapesil LM**).
- The use of **Mapesil AC Eco** 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 Eco** to chemical agents is generally excellent; however, due to the numerous products and working conditions to which **Mapesil AC Eco** can be applied, it is always advisable to do a sample test in cases of doubt.
- Do not use **Mapesil AC Eco** 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 E-PU 21 SL**) 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);

In order to obtain the best performance always respect the sealing section proportion examples below:

joint width (mm) W	5	10	15	20	25	30	35	40	45	50
depth of sealant (mm) D	5	10	10	10	12.5	15	17.5	20	20	20
Mapefoam diameter (mm)	6	15	20	25	30	40	40	2x20	2x25	2x30

To control the depth of the joint and to prevent **Mapesil AC Eco** 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 Eco**.

Application of Mapesil AC Eco

Mapesil AC Eco is packed in recycled plastic 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 Eco** must be finished off with a tool moistened with **UltraCare Smooth Silicone** by MAPEI before a superficial film has formed.

Crosslinking

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

the atmosphere.

CLEANING

Traces of unpolymerised **Mapesil AC Eco** may be removed with common solvents (ethyl acetate, petrol, toluene); after complete cross-linking, the silicone rubber may only be removed mechanically. Avoid contact between **Mapesil AC Eco** not yet polymerised and any type of solvent, to avoid delays or inhibition of the final hardening process.

CONSUMPTION

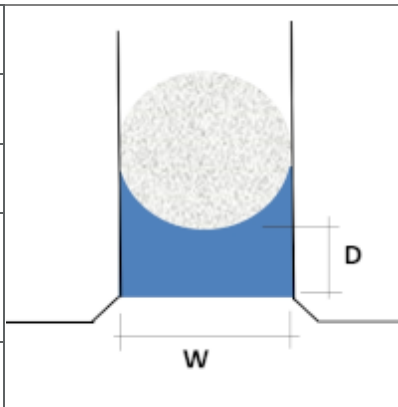
Mapesil AC Eco:

Consumption of **Mapesil AC Eco** varies depending on the width of the joints. Some examples of consumption for expansion, contraction and fillet joints are shown in the chart.

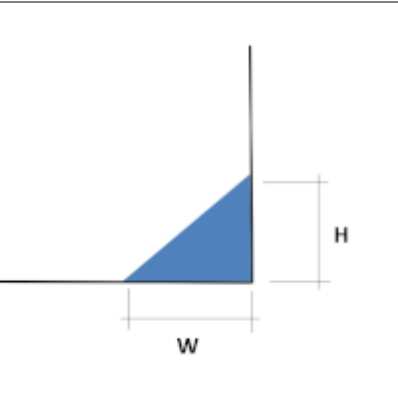
Primer FD:

100 g/m².

contraction or expansion joint										
joint width (mm) W	5	10	15	20	25	30	35	40	45	50
depth of sealant (mm) D	5	10	10	10	12,5	15	17,5	20	20	20
sealant consumption per linear metre (ml)	25	100	150	200	313	450	613	800	900	1000
yield for 310 ml cartridge (m)	12.4	3.1	2.1	1.6	1.0	0.7	0.5	0.4	0.3	0.3



fillet joint								
joint width (mm) W	5	10	15	20	25	30	35	
height of sealant (mm) H	5	10	15	20	25	30	35	
sealant consumption per linear metre (ml)	12,5	50	113	200	313	450	613	
yield for 310 ml cartridge (m)	24.8	6.2	2.8	1.6	1.0	0.7	0.5	



PACKAGING

Mapesil AC Eco:

310 ml recycled plastic cartridges.

Primer FD:

0.9 kg and 0.2 kg bottles.

COLOURS

Mapesil AC is available in various colours from the “MAPEI COLOURED GROUTS” range, plus transparent.

STORAGE

Mapesil AC Eco 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

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.

PRODUCT FOR PROFESSIONAL USE

TECHNICAL DATA (typical values)

MAPESIL AC ECO COMPLIES WITH:

- EN 15651-1
- EN 15651-2
- EN 15651-3
- EN 15651-4

PRODUCT IDENTITY

Type:	thixotropic paste
Colour:	transparent + colours
Density (g/cm ³):	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/mm ² (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-EX-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:	XS1
EN 15651-4: sealant for pedestrian flooring	PW-EX-INT
Class:	12.5 E
Tensile strength – according to ISO 37 (N/mm ²):	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/cm ³):	1.02

Modulus of elongation measured according to ISO 8339 METHOD A (N/mm ²):	
– at 25% elongation:	0.20
– at 50% elongation:	0.27
– at 100% elongation:	0.35
Maximum movement allowed according to en 15651-1 and EN 15651-2 (%):	25
Maximum movement allowed on floors according to EN 15651-4 (%):	12.5
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

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.

Mapesil AC Eco		
100	WHITE	
103	MOON WHITE	
111	SILVER GREY	
112	MEDIUM GREY	
113	CEMENT GREY	
114	ANTHRACITE	
110	MANHATTAN 2000	
130	JASMINE	
132	BEIGE 2000	

142	BROWN	
120	BLACK	
999	TRANSPARENT	

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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