

MAPEFLEX AC3

Paintable acrylic sealant with a smooth finish



WHERE TO USE

Mapeflex AC3 is an acrylic resin-based sealant in water dispersion and is used to seal internal joints with a limited amount of movement. Once it has set the surface of the sealant has a smooth finish that can be painted over with suitable elastomeric paint normally used in the building industry.

Some application examples

- Sealing joints in construction and building work with small to medium amounts of movement.
- Sealing between precast concrete panels with movements up to $\pm 7.5\%$ of the width of the joint.
- Sealing between plasterboard, wooden and concrete panels.
- Fillet seals between different building materials such as concrete, render, bricks, cellular cement, wood and natural stone.
- Air and water-tight seals between window frames and walls.
- Leak-proof elastic gaskets between doors, roller-blind housings and walls, adjacent walls, ceilings, wooden panels and insulating panels.

TECHNICAL CHARACTERISTICS

Mapeflex AC3 is a one-component acrylic resin-based product in water dispersion. It comes in the form of a thixotropic paste which is easy to apply in joints up to 20-25 mm wide in both horizontal and vertical surfaces.

Mapeflex AC3 complies with EN 15651-1 standards ("Sealants for internal and external façade elements") and has a performance rating of F-EXT-INT.

Mapeflex AC3 does not contain phthalates and is certified as to have very low emission of VOC.

It has good resistance to water, unless it is in permanent contact or if the sealant is not fully cured due to residual water being present.

When **Mapeflex AC3** has set it may be painted over with elastomeric paint normally used in the building industry.

Mapeflex AC3 adheres strongly to porous absorbent surfaces such as concrete, wood, gypsum, render, brickwork, cellular cement, natural stone, rough wood, etc.

If there is a medium to high amount of movement (more than $\pm 7.5\%$ of its width) in the joint to be sealed with **Mapeflex AC3**, it is recommended to improve its adhesion properties by applying a thin coat of primer made from **Mapeflex AC3** diluted accordingly with water. In such cases, apply the priming sealant with a brush along the sides of the joint and then apply **Mapeflex AC3** while it is still wet.

RECOMMENDATIONS

- Do not apply **Mapeflex AC3** in joints with movements of more than $\pm 7.5\%$ when in service. In such cases, use a more elastic sealant such as **Mapeflex AC4**, **Mapeflex PU40**, **Mapesil LM** or **Mapesil AC**.
- Do not apply **Mapeflex AC3** if there is a risk of it being in constant or prolonged contact with standing or running water. In such cases use **Mapesil AC**, **Mapeflex PU 45 FT** or **Mapesil LM**.
- Do not apply **Mapeflex AC3** on the surface of metal or non-absorbent surfaces, otherwise it will take a very long time for it to fully harden. In such cases use **Mapesil BM**, **Mapeflex PU 45 FT** or **Mapeflex MS 45**.
- Do not apply **Mapeflex AC2** in joints that will be stepped or driven over. In such cases use **Mapeflex PU50 SL**, **Mapeflex PU 45 FT** or **Mapeflex PU65**.

- Do not apply **Mapeflex AC3** if there is rising damp from the ground. Leaching of the sealant could occur while it is still wet.
- Exterior application is allowed provided that the joint's movements are proven to be offset by the elasticity of the product.
- Do not apply **Mapeflex AC3** in external joints if it is about to rain. Leaching of the sealant could occur while it is still wet.
- When painting over **Mapeflex AC3** once it has set, it is recommended to apply a generous coat of **elastomeric paint** to prevent the surface of the paint cracking. Always carry out preliminary tests beforehand to make sure the sealant and paint are compatible.
- Do not apply **Mapeflex AC3** if the temperature is lower than +5°C and never expose the sealant to freezing conditions until it has fully hardened.

APPLICATION PROCEDURE

Preparation and correct dimensioning of the joint

All the surfaces to be sealed must be sound and have no traces of dust, loose portions, oil, grease or old paint. In order to function correctly, the sealant must be able to expand and contract freely once it has been applied and has set in the joint. It is important, therefore, that:

- it only adheres to the sides 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 $\pm 7.5\%$ of the initial width of the joint at +23°C;
- the thickness of the **Mapeflex AC3** seal is always less or, at most, equal to the width of the joint.

To calibrate the depth of the seal and prevent **Mapeflex AC3** adhering to the bottom of the joint, insert **Mapefoam** expanded polyethylene cord along the bottom of the joint, which is available in various diameters according to the width of the joint to be sealed.

Application method

Mapesil AC3 is supplied in 310 ml tubes.

To apply the sealant, cut off the tip of the threaded part of the tube and screw on the nozzle. Trim the tip of the nozzle at 45° according to the width of the joint to be sealed, insert the tube into a suitable sealant gun and feed the sealant into the joint.

After applying **Mapeflex AC3**, smooth over the sealant with a suitable tool dipped in water before a skin forms on the surface.

If the section of the joint to be sealed is medium to large, it may be necessary to compensate for shrinkage of the first bead of **Mapeflex AC3** due to evaporation of the water contained in the sealant by applying a second bead.

CLEANING

Remove any traces of **Mapeflex AC3** from tools and surfaces with water. Once the product has set it may only be removed using mechanical means.

Curing

Mapeflex AC3 sets when the water contained in the product evaporates off. Setting times depend on the surrounding temperature and level of moisture in the air. At +23°C and 50% R.H., a thickness of 2-3 mm sets in the first 24 hours. It may take up to 2-3 weeks for the whole section of the sealant to set, depending on its thickness, the surrounding temperature and the absorption of the substrate.

High temperatures and more absorbent substrates accelerate the setting process, whereas large sections of sealant, low temperatures and non-absorbent substrates will extend the setting time.

Mapeflex AC3 must be protected against leaching for at least the first 24 hours after application.

CONSUMPTION

Depending on the size of joint to be sealed, for example:

- for a 5 x 5 mm joint around 12 metres per tube;
- for a 10 x 10 mm joint around 3 metres per tube;
- for a 20 x 20 mm joint around 1.5 metres per tube.

PACKAGING

Mapesil AC3 is supplied in 310 ml tubes and is available in white or grey.

STORAGE

The product remains stable for 18 months if stored in a dry, cool area.

Protect **Mapeflex AC3** from freezing weather.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapeflex AC3 is not considered hazardous according to current norms and guidelines regarding the classification of mixtures. It is recommended to use protective gloves and goggles and to 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 Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Classification according to EN 15651-1:	F-EXT-INT
Consistency:	paste
Colour:	white and grey
Density (g/cm ³):	1.65
Dry solids content (%):	83
APPLICATION DATA (at +23°C - 50% R.H.)	
Application temperature:	+5°C to +40°C
Time to form surface skin:	20 mins.
Hardening rate:	surface 2-3 mm in 24 hours, complete setting 1-3 weeks
FINAL PERFORMANCE	
Shrinkage after setting (%):	24
Shore A hardness (ISO 7619-1):	53
Elongation at failure (ISO 37 type 3) (%):	120
Elongation in service (%):	± 7.5%
Reference standard:	EN 15651-1 (sealants for joints in internal and external façade elements)

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

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installation.

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