

Mapeflex AC4

**One-component,
paintable, water-based
acrylic sealant**



WHERE TO USE

Mapeflex AC4 is used to seal internal and external expansion and construction joints subject to a medium amount of movement and surface cracks in all types of absorbent building materials.

Some application examples

- Seal joints between precast concrete panels with movement up to 12.5%.
- Seals between prefabricated panels in concrete, wood and gypsum board.
- Seals between elements in concrete, plaster, brickwork, light-weight cement, wood, natural stone, etc.
- Airtight and waterproof seals between wooden frames and masonry.
- Flexible seals between doors, roller-blind caissons and masonry, and between walls, ceilings, wooden panels and insulation panels.
- Sealing joints between insulation panels and external building features (doorsteps, windows, window-sills, cornices, etc.) in thermal cladding systems.

TECHNICAL CHARACTERISTICS

Mapeflex AC4 is a one-component product based on acrylic resins dispersed in water and is a thixotropic paste that is easy to apply on both horizontal and vertical surfaces.

Mapeflex AC4 seals remain unaltered even after

many years of exposure to severe weather conditions, industrial environments and thermal gradients. They remain flexible in temperatures as low as -30°C and resist temperatures up to $+80^{\circ}\text{C}$ ($+100^{\circ}\text{C}$ for short periods).

Their resistance to chemical agents (for diluted acids and alkalis only) is good. However, given the large number of products and operating conditions, it is best to carry out a few tests before using **Mapeflex AC4**. Its resistance to water is good as long as it is not permanently immersed.

Before painting over **Mapeflex AC4** it must be fully polymerised. We recommend carrying out preliminary tests to make sure the sealant and paint are compatible.

Mapeflex AC4 complies with EN 15651-1 norm ("*Sealants for façade elements*") with performance rating F-EXT-INT.

Adhesion

Mapeflex AC4 adheres to all porous surfaces, such as concrete, wood, gypsum, plaster, brickwork, light-weight concrete and natural stone.

If **Mapeflex AC4** is to be used for a heavy-duty seal, it is best to apply a coat of primer (**Mapeflex AC4** diluted with water) to the sides of the joint and then complete the seal within the next 2 hours approximately.

RECOMMENDATIONS

- Do not use **Mapeflex AC4** for expansion joints

| TECHNICAL DATA (typical values) | |
|---|-------------------------|
| PRODUCT IDENTITY | |
| Classification according to EN 15651-1: | F-EXT-INT, class 12.5 P |
| Consistency: | paste |
| Colour: | white and grey |
| Density (g/cm ³): | 1.58 |
| Dry solids content (%): | 80 |
| APPLICATION DATA (at +23°C - 50% R.H.) | |
| Application temperature range: | from +5°C to +40°C |
| Skin formation time: | 10-15 min. |
| Hardening rate: | 3-5 mm/day |
| FINAL PERFORMANCE | |
| Shrinkage after hardening (%): | approx. 20 |
| Shore A hardness (DIN 53505): | 10 |
| Elongation at break (DIN 53504 - S3a) (%): | 500 |
| Elongation in service (%): | 12.5 |

with movement greater than 12.5% (use **Mapesil LM** or **Mapeflex PU40**).

- Do not use **Mapeflex AC4** for seals that must remain in continuous water immersion (use **Mapesil AC**).
- Do not use **Mapeflex AC4** on metal surfaces and non-absorbent materials (use **Mapesil BM** or **Mapeflex PU45**).
- Do not use **Mapeflex AC4** for joints subject to foot traffic (use **Mapeflex PU20**, **Mapeflex PU30** or **Mapeflex PU45**).
- Do not use **Mapeflex AC4** if there is a possibility of rising damp.
- Do not apply **Mapeflex AC4** at temperatures lower than +5°C or where frost is forecast.

APPLICATION PROCEDURE

Preparing and sizing the joint

All surfaces to be sealed must be sound, free of dust and crumbling parts, oils, grease and old paint.

If the sealant is to perform correctly, it must be allowed to elongate and compress freely after application to the joint. It is therefore necessary:

- that it adheres perfectly to the side walls of the joint and not to the bottom;
- that the width of the joint is assessed correctly so that its length in operation is not in excess of 12.5% of the initial width calculated at +23°C;
- the section to be sealed must respect the width/depth ratios indicated in the table:

| RATIO WIDTH/ DEPTH OF SEALANT | |
|-------------------------------|--------------------|
| width of joint | depth of sealant |
| up to 10 mm | same as width |
| from 11 to 20 mm | 10 mm in all cases |
| more than 20 mm | half the width |

To adjust the depth and make sure that **Mapeflex AC4** does not adhere to the bottom, it is necessary to apply special filling

materials, polyethylene foam or similar, such as **Mapefoam**.

Using the sealant

Mapeflex AC4 is supplied in 310 ml cartridges, 550 ml sausages and 25 kg buckets.

To use the cartridge, cut off at the top of the thread, screw on the nozzle, cutting a 45° opening according to the size of the joint, insert the cartridge into the pistol and extrude.

To use **Mapeflex AC4** from the bucket, the proper tools must be employed. Insert the cartridge in the extrusion gun, remove the end of the bag, insert the nozzle in the collar of the gun and extrude the product.

Finishing must be carried out with a damp tool before a surface-film forms.

Cleaning

Mapeflex AC4 can be cleaned from tools and surfaces with water. When it has completely cross-linked, water and mechanical action must be used.

Hardening

Mapeflex AC4 becomes flexible through water evaporation. The time required depends on ambient temperature and humidity. A thickness of 3-5 mm needs 24 hours to harden completely at +23°C and 50% R.H. Higher temperatures accelerate the process while greater thicknesses require more time.

Mapeflex AC4 must be protected from washout at least during the first 24 hours after application.

PACKAGING

Mapeflex AC4 is available in 310 ml cartridges, 550 ml soft sausages and 25 kg buckets in white and in grey.

STORAGE

Mapeflex AC4 is stable for 24 months if stored in a cool, dry place. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapeflex AC4 is not considered as dangerous according to the current regulation regarding the classification of mixtures. It is however recommended to use gloves, eyes protection and to take the usual precautions taken when handling chemical products. For further and complete information about a safe use of our product please refer to our latest version of the 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

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



**Mapeflex
AC4**



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