

# MAPEFLEX AC4

Paintable, 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 precast concrete panels, wood and plaster board.
- Seals between concrete elements, plaster, brickwork, light-weight cement, wood, natural stone, etc.
- Airtight and waterproof seals between wooden frames and masonry.
- Flexible tight 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, acrylic, resin-base, thixotropic paste in water dispersion. It 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 at temperatures as low as -30°C and resist to temperatures up to +80°C (+100°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.

When painting over **Mapeflex AC4**, always use elastomeric paint such as **Elastocolor Paint**. In case of porous or absorbent substrates, the sealant can be painted over after only 20 minutes or after complete hardening. We recommend carrying out preliminary tests to make sure the sealant and paint are compatible.

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

**Mapeflex AC4** is certified as very low emission of volatile organic compounds (VOC).

### Adhesion

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

If **Mapeflex AC4** is to be used for a heavy-duty seal, it is recommended 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 with movement greater than 12.5% (use **Mapesil LM** or **Mapeflex PU40**).
- Do not use **Mapeflex AC4** for seals that are permanently immersed in water (use **Mapesil AC**).
- Do not use **Mapeflex AC4** on metal surfaces and non-absorbent materials (use **Mapesil BM** or **Mapeflex PU 45 FT**).

- Do not use **Mapeflex AC4** for joints subject to foot traffic (use **Mapeflex PU 45 FT**).
- Do not use **Mapeflex AC4** if there is a risk of rising damp.
- Do not apply **Mapeflex AC4** at temperatures lower than +5°C or where freezing temperatures are forecast.

## APPLICATION PROCEDURE

### Preparing and sizing the joint

All surfaces to be sealed must be sound, free of dust and crumbling parts, oil, grease and old paint. In order to ensure the correct function of the sealant, **Mapeflex AC4** must be able to stretch and contract freely. Therefore, it is necessary to:

- 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 elongation in service does not exceed 12.5% of the initial width determined 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 soft cartridges and 25 kg drums.

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 gun and extrude.

To use soft cartridge, insert it into the suitable gun, cut the edge of the packaging, insert the nozzle (which must be cut at 45° according to the size of the joint) in the fastening ring and extrude the product.

To use **Mapeflex AC4** from the bucket, the suitable extrusion pump must be employed.

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 cartridges 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 dangerous according to the current regulation regarding the classification of mixtures. It is recommended to wear protective gloves and goggles, and to take the usual precautions for handling chemicals.

For further and complete information about a safe use of our product please refer to our latest version of the Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

|   |                              |
|---|------------------------------|
| 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 <sup>3</sup> ):           | 1.63                         |
| Dry solids content (%):                 | 85                           |
| EMICODE:                                | EC1 Plus - very low emission |
| 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 mm/day                     |
| FINAL PERFORMANCE                       |                              |
| Shrinkage after hardening (%):          | approx. 20                   |
| Shore A hardness (ISO 7619-1):          | 20                           |
| Elongation at break (ISO 37-1) (%):     | 500                          |
| Elongation in service (%):              | 12.5                         |

## 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](http://www.mapei.com)

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