

# Mapeflex AC-FR

## Acrylic sealant for fire-break joints



### WHERE TO USE

**Mapeflex AC-FR** is a plasto-elastic sealant for sealing fire-break joints in walls, ceilings, profiles and metal pipes in civil and industrial buildings and in infrastructural works.

If there are environmental stresses, only

**Mapeflex AC-FR** acts as a traditional sealant ensuring the sealed joint an hermetic water-, air- and dust-tightness, with temperatures between -20°C and +70°C. In case of fire, the particular formulation of

**Mapeflex AC-FR** hinders the passage of flames, smoke and heat through the sealed interstice, impeding the risk of the fire propagation to the adjacent rooms.

The fire resistance of **Mapeflex AC-FR** is certified by an authorized institute, in compliance with the European norm EN 1366-4.

**Mapeflex AC-FR** doesn't contain halogenous substances and hasn't any intumescent behaviour. After complete polymerization **Mapeflex AC-FR** can be painted over with elastomeric paints, such as **Elastocolor Paint** or **Elastocolor Rasante**.

### Some application examples

- Fire-break joints of walls and ceilings.
- Sealing fire-break main doors and shutters.
- Sealing unflammable pipes and conduits.
- Connection sealing between gypsum board panels.

- Sealing joints and connections in rooms that are subject to a possible risk of fire.

- Antiexplosive rooms.

- Warehouses for flammable materials.

- Public buildings and premises, such as cinemas, theatres, hospitals, sports facilities.

### TECHNICAL CHARACTERISTICS

**Mapeflex AC-FR**, acrylic sealant in water emulsion, is a soft, but thixotropic paste. It's odourless and, therefore, it can be applied also in interiors. It can be easily applied on horizontal and vertical surfaces.

**Mapeflex AC-FR** cross-links thanks to the evaporation of the water contained and forms an elastomer, which has an elasto-plastic behaviour that can compensate working movements up to 12.5% of the initial width of the joint. The weatherproofness and the resistance to the sudden changes of temperature are good.

The adhesion without primer on all the absorbent substrates, which have to be clean, sound and dry or at the most mildly damp (but not wet) is very good. In case of severe mechanical stresses we suggest applying on the joint walls a primer composed of **Mapeflex AC-FR**, suitably diluted with water. The sealant is certified according to the norm EN 1366-4 and therefore it's suitable for the realization of fire-resistant joints without using superficial thermal protection tapes, cords or cupels.

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

Consistency:	soft thixotropic paste
Colour:	grey
Bulk density (g/cm <sup>3</sup> ):	1.62 ± 0.05
Application temperature range:	from +5°C to +50°C
Skin formation time:	10 min.
Allowed maximum movement in operation (%):	12.5
Elongation modulus at 100% (ISO 8339/A) (N/mm <sup>2</sup> ):	0.12
Elongation modulus at 50% (N/mm <sup>2</sup> ):	0.12
Shore A hardness (DIN 53505):	25
Resistance to ageing:	good
Resistance to the atmospheric agents:	good
Continuous resistance to the temperature:	from -20°C to +70°C
Fire resistance:	certified according to EN 1366-4
Hazard classification according to EC 1999/45:	none. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet

### RECOMMENDATIONS

- Do not apply **Mapeflex AC-FR** on substrates that are wet or subject to capillary rising damp or in case of imminent rain.
- Do not apply **Mapeflex AC-FR** at temperatures lower than +5°C or when frost is forecast.
- Do not use **Mapeflex AC-FR** in continuous or prolonged contact with free flames or when the temperatures of the ambient or of the substrate are high.
- Do not paint **Mapeflex AC-FR** with solvent-based paints and, in any case, not before the sealing mass has completely polymerized.
- Do not use **Mapeflex AC-FR** for sealings that are permanently immersed in water.
- Do not use **Mapeflex AC-FR** when the movements are greater than 12.5% of the initial width.

### Cross-linking

**Mapeflex AC-FR** exposed to the air cross-links and becomes elastic because of the effect of the evaporation of the water that is

contained in the formula and also, minimally thanks to the absorption of the porous and absorbent substrates which it is applied on.

### APPLICATION PROCEDURE

#### Preparing and sizing the joint

All the surfaces to be sealed must be dry, sound, free of dust and crumbling parts, oils, grease, waxes, old paints and rust.

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

- it adheres perfectly to the side walls of the joint and not to the bottom;
- the joint width 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 thickness of the sealing with **Mapeflex AC-FR** is connected with its width and precisely:
  - for joints between 6 and 10 mm wide, the depth must be equal to the width;
  - for joints between 11 and 30 mm wide, the depth must be half of the width, however greater than 10 mm.

Please refer to "Classification Report No. CS1 1535 FR" dated 6/4/2010 to choose

the correct section of sealant for fire-break joints.

To adjust the depth of the sealant and to avoid that it adheres to the joint bottom, apply **Mapefoam**, specific filling closed cell polyethylene foam cord, which is available in various diameters.

#### **Application of a bonding primer**

If a higher adhesion of the sealant to the substrate is required, apply, on the joint edges a primer, which is composed of **Mapeflex AC-FR**, which has been suitably diluted with water up to obtain a fluid and brushable consistency. Apply a continuous layer (without interruptions) on the joint edges and wait that the surface has dried, before applying the sealant.

#### **Application of Mapeflex AC-FR**

**Mapeflex AC-FR** is supplied in 550 ml sausages; to use the product insert the sausage in the caulking gun suitable for sausages, cut the top of the sausage, screw the fastening ring, with the plastic extrusion nozzle inserted, on the caulking gun. Cut the extrusion nozzle at 45° according to the required extrusion section, tape the joint edges with adhesive paper, in order to obtain a perfect aesthetical finishing. After extruding, smooth **Mapeflex AC-FR** by using a tool dampened with soapy water, before the superficial film forms.

#### **Cleaning**

To remove still fresh traces of **Mapeflex AC-FR** from the tools and from the surfaces adjacent to the joint, use a sponge wet with water. When it has completely cross-linked, it can be removed only mechanically.

#### **PACKAGING**

**Mapeflex AC-FR** is available in 550 ml soft-cartridges in the grey colour. It can be painted over after it has completely polymerized.

#### **STORAGE**

12 months, if it's stored in the original packaging and in a dry place.

#### **SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION**

**Mapeflex AC-FR** is not considered hazardous according to current standards and regulations regarding the classification of mixtures. It is however recommended to use gloves, eyes protection and to take the usual precaution taken when handling chemical products are recommended.

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

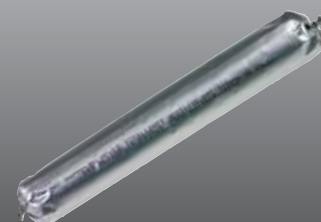
PRODUCT FOR PROFESSIONAL USE.

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

**All relevant references  
for the product are available  
upon request and from  
[www.mapei.com](http://www.mapei.com)**



**Mapeflex  
AC-FR**



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