



# MapePUR Roof Foam M

# MapePUR Roof Foam G

**One-component polyurethane expanding foams for rapid bonding of building components**



#### WHERE TO USE

**MapePUR Roof Foam M** and **MapePUR Roof Foam G** are both used for rapid bonding of building components and to fill, seal and insulate gaps and breaks between a wide range of construction features and fittings.

#### Some application examples

- Bonding tiles on sloping roofs.
- Bonding electrical components (cable sheaths, junction boxes...).
- Bonding insulating and soundproofing panels on limited areas.
- Bonding wooden and plasterboard coating panels on limited areas.
- Mounting, sealing and insulating internal and external window fittings.
- Filling and insulating gaps between different types of building materials.
- Insulating through-pipes for heating and cooling systems.

#### TECHNICAL CHARACTERISTICS

**MapePUR Roof Foam M** is a one-component expanding foam contained in a pressurised spray can with a hand lever to feed the product, while **MapePUR Roof Foam G** is a one-component expanding foam contained in a pressurised spray can used in combination with a special **MapePUR Gun Standard** gun to feed the product.

Both products are one-component expanding foam made from a mixture of polyurethane prepolymer, foaming agents and special additives and contain no CFCs that could damage the ozone layer. The extruded products expand upon contact with the humidity in the air and then harden rapidly to form a stable, closed-cell structure with excellent mechanical characteristics and high insulating and soundproofing properties.

**MapePUR Roof Foam M** and **MapePUR Roof Foam G** are characterised by their reduced confined expansion rate to prevent them lifting the component bonded in place, and are waterproof and resistant to temperatures from  $-40^{\circ}\text{C}$  to  $+90^{\circ}\text{C}$ , humidity and the effect of ageing. The foam adheres well to all materials normally used in the building industry, such as brickwork, concrete, gypsum, wood, metal, glass, foam polystyrene, PVC and rigid foam polyurethane, and is also resistant to the formation of mould and mildew. Once hardened, **MapePUR Roof Foam M** and **MapePUR Roof Foam G** can be cut, sanded, ground, drilled, skimmed with cementitious products and painted. According to the DIN 4102 German standards they are in flammability class B2.

**MapePUR Roof Foam M** and **MapePUR Roof Foam G** are certified as being resistant to winds.

#### RECOMMENDATIONS

Neither version of the product, manual application and gun application, adhere to polyethylene, silicone or Teflon. Also, once hardened, the foam must be protected from direct exposure to UV rays to prevent the surface being damaged.

## MapePUR Roof Foam M MapePUR Roof Foam G



Bead-bonding roof tiles



Spot-bonding roof tiles



Cleaning a foam filler extrusion gun

The amount the foam expands depends on the size and shape of the cavity or gap to be filled, the amount of moisture in the substrate, the temperature of the can and how well the various components in the can are mixed together.

### APPLICATION PROCEDURE

#### Substrate preparation

The surface on which the foam is to be applied must have no traces of dust and must be clean with no grease or oil stains; any loose or detached portions must be removed. Protect delicate surfaces next to the area where the products are being applied with masking tape to prevent the products going onto them.

#### Preliminary operations before applying the foam

The surrounding temperature when applying the foam must be between +5°C and +30°C. The foam performs best (maximum expansion and hardening rate) if the can and contents are at a temperature of around +20-25°C.

If necessary heat the can in hot water (maximum +40°C) for 15-20 minutes before use.

Before applying the product, hold the can upside down and shake well for at least 30 seconds to thoroughly mix the contents of the can. The can should also be shaken every time application is interrupted for long periods in order to improve its yield and to improve application. Dampen substrates prior to application by spraying them with water.

#### Application of the foam MapePUR Roof Foam M (manual application)

Remove the protective cap and screw the feed tube to the spray nozzle. Hold the can upside down, point the tube to the area where the foam is to be applied and press the hand lever.

When used for bonding, extrude the foam in beads and spots and immediately place the component in position on the wet foam.

When filling gaps, feed the foam into the area starting from the lowest, deepest part and work upwards until the gap is filled to around 50-60% of its volume. The gap will become completely filled when the material has expanded.

#### MapePUR Roof Foam G (gun application)

Screw the can to the threaded collar in the MapePUR Gun Standard. Open the flow regulating valve for the foam located at the back of the gun. Point the gun towards the area to be filled and press the trigger. The amount of foam to be fed into the area may be regulated with the feed screw located at the back of the gun and by the stroke of the trigger.

When used for bonding, extrude the foam in beads and spots and immediately place the component in position on the wet foam. When filling gaps, feed the foam into the area starting from the lowest, deepest part and work upwards until the gap is filled to

around 50-60% of its volume. The gap will become completely filled when the material has expanded. If the can of MapePUR Universal G runs out, replace it immediately with a new one; shake well prior to use to prevent the foam setting inside the gun. To fill larger gaps (cracks more than 5 cm wide), we recommend applying several layers of product; wait between each layer until the previous one has expanded before applying the next one.

Immediately after applying the product, we recommend spraying the foam with water to get a better yield and optimum polymerisation. Once hardened, any excess foam can be cut, sanded, ground or drilled and skimmed with cementitious products or painted.

### RECOMMENDATIONS BEFORE, DURING AND AFTER APPLICATION

If only part of the can of MapePUR Roof Foam M (can with hand lever) is used, we recommend holding the can vertically, blocking the end of the feed tube by bending it so the foam does not solidify and to allow the remaining product to be used later. If the tube is blocked by hardened foam replace it with a new one.

If only part of the can of MapePUR Roof Foam G (can for gun application) is used, we recommend leaving the can attached to the MapePUR Gun Standard gun and closing the flow regulating valve for up to several weeks.

If work is interrupted for long periods, on the other hand, we recommend unscrewing the can from the MapePUR Gun Standard gun and cleaning all traces of product from the external surfaces and the internal circuit of the gun with MapePUR Cleaner.

To clean the internal circuit, screw the can of MapePUR Cleaner to the collar in the MapePUR Gun Standard gun and spray the solvent for a few seconds until no more product comes out of the circuit. Unscrew the MapePUR Cleaner can from the gun and spray the remaining solvent from the internal circuit by pulling the trigger of the gun. Dispose of the MapePUR Cleaner used for cleaning purposes carefully.

For both products, store the partially used can vertically after use. Before using it again, shake the can for 30 seconds as described previously.

MapePUR Roof Foam M and MapePUR Roof Foam G are contained in pressurised cans and must be protected against exposure to direct sunlight and temperatures higher than +50°C.

#### Cleaning

The foam may be removed before it hardens by spraying MapePUR Cleaner on the surface to be cleaned. MapePUR Cleaner is a solvent-based product and may discolour surfaces it comes into contact with.

We recommend carrying out preliminary tests to verify compatibility between the product and the substrate to be treated. Once hardened the foam may only be removed mechanically.

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

	MapePUR Roof Foam M	MapePUR Roof Foam G	MapePUR Cleaner
<b>Consistency:</b>	cream		liquid
<b>Colour:</b>	grey		transparent
<b>Inflammable:</b>	yes		yes

### APPLICATION DATA

<b>Application temperature:</b>	+5°C to +30°C	+5°C to +30°C
<b>Optimum can/contents temperature:</b>	+20°C to +25°C	+20°C to +25°C
<b>Flammability class (DIN 4102):</b>	B2	

### FINAL PERFORMANCE

<b>Dust dry (at +23°C and 50% R.H.) (minutes):</b>	5-10	
<b>In service temperature range:</b>	-40°C to +90°C	
<b>Minimum waiting time before cutting hardened resin (Ø 20 mm at +20°C and 60% R.H.):</b>	20-30 mins.	
<b>Complete hardening time (h):</b>	1½-5	
<b>Free expansion (litres):</b>	45	
<b>Compressive strength (N/cm<sup>2</sup>):</b>	4.5	
<b>Tensile strength (N/cm<sup>2</sup>):</b>	7.5	
<b>Elongation at failure (%):</b>	20-25	
<b>Adhesion to roof tiles (N/cm<sup>2</sup>):</b>	12.5	
<b>Density (kg/m<sup>3</sup>):</b>	20	19
<b>Shrinkage (after 24h at +20°C and 60% R.H.) (%):</b>	1	
<b>Water absorption after 24 h (DIN 53428) (%):</b>	1	
<b>Thermal conductivity at +20°C (DIN 52612) (W/m K):</b>	0.039	0.036



**MapePUR Roof Foam M**  
**MapePUR Roof Foam G**



#### **YIELD**

**MapePUR Roof Foam M** up to 45 litres\*; for bonding roof tiles the yield of one 750 ml can is 6-12 m<sup>2</sup>, depending on the slope of the roof and the stresses to which it will be exposed.

**MapePUR Roof Foam G** up to 45 litres\*; for bonding roof tiles the yield of one 750 ml can is 8-16 m<sup>2</sup>, depending on the slope of the roof and the stresses to which it will be exposed.

\* Free expansion at +20°C and 60% R.H.

The yield of both products depends on the internal mixing of their components, the level of humidity and the temperature of the surrounding air and can.

#### **PACKAGING**

- **MapePUR Roof Foam M:** 750 ml.
- **MapePUR Roof Foam G:** 750 ml.
- **MapePUR Cleaner:** 500 ml.

#### **STORAGE**

**MapePUR Roof Foam M** and **MapePUR Roof Foam G** may be stored for 18 months if kept vertical in a dry, covered area in their original sealed packaging at a temperature of between +10°C and +25°C.

**MapePUR Cleaner** may be stored for 18 months if kept in a dry, covered area in its original sealed packaging at a temperature of between +10°C and +25°C.

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

**MapePUR Roof Foam M** and **MapePUR Roof Foam G** are highly inflammable and stored in a pressurized spray can; we recommend storing them away from naked flames and sparks, to avoid smoking, to prevent the build up of electrostatic energy and to work in well ventilated areas. They may irritate the skin, eyes and respiratory track, cause sensitisation if they come into contact with the skin to those predisposed and with the respiratory tracks. They may

cause irreversible damage if used for lengthy periods. When applying the product, we recommend using protective cloths, gloves and goggles, protecting the respiratory tracks wearing a mask and working in well ventilated areas. If the product comes into contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention. We advise against using these products in the presence of breastfeeding women.

**MapePUR Roof Foam M** and **MapePUR Roof Foam G** are also hazardous for aquatic life. Do not dispose of these products in the environment.

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

PRODUCT ONLY 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)**

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