MapePUR Universal Foam M
MapePUR Universal Foam G

One-component expanding polyurethane foams for filling gaps, for soundproofing and thermal insulation

WHERE TO USE

MapePUR Universal Foam M and **MapePUR Universal Foam G** are used to fill, seal and insulate gaps and breaks between a wide range of construction features and fittings used in the building industry and in plant systems.

Some application examples

- Thermal insulation and soundproofing of door frames, window frames and roller-blind housings.
- Filling and insulating gaps between different types of building materials.
- Fixing support frames in place for door and window fittings.
- Filling and insulating gaps between support frames and walls and support frames and fittings when installing doors and windows.
- Insulating through pipes for heating, air-conditioning and cooling systems.
- Filling and insulating construction features and fittings on roofs and flat roofs.
- Filling and insulating features and fittings used for external insulation systems.
- Bonding embedded electrical fittings such as cable-runs and junction boxes, including in plasterboard walls.
- Sealing formworks to make them leak-proof when pouring fluid concrete.

TECHNICAL CHARACTERISTICS

MapePUR Universal Foam M is a one-component expanding foam contained in a pressurized spray can with a hand lever to feed the product, while **MapePUR Universal Foam G** is a one-component expanding foam contained in a pressurized 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, special foaming agents and additives. They contain no CFCs and are thus harmless to 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 Universal Foam M and **MapePUR Universal Foam G** are waterproof and are resistant to temperatures from -40°C to +90°C, humidity and the effect of ageing. Both types of foam adhere 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 are also resistant to the formation of mould and mildew. Once hardened, **MapePUR Universal Foam M** and **MapePUR Universal Foam G** can be cut, sanded, ground, drilled, skimmed with cementitious products and painted. According to DIN 4102 German standards they are classified as flammability class B3.

MapePUR Universal Foam M
MapePUR Universal Foam G

Filling gaps between a window frame and wall

Filling a ventilation channel

RECOMMENDATIONS

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

Preparation of the substrate

The surface on which the foam is to be applied must have no traces of dust, must be clean with no grease or oil stains and any loose or detached material must be removed. Protect delicate surfaces next to the area where the product is being applied with masking tape to prevent the product 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 to +25°C.
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 Universal 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. 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 Universal Foam G (gun application)
Screw the can to the adaptor for the **MapePUR Gun Standard** gun using the threaded collar. 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. 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 Foam 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 (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, drilled, skimmed with cementitious products or painted.

RECOMMENDATIONS BEFORE, DURING AND AFTER APPLICATION

If only part of the can of **MapePUR Universal 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 Universal 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 a few weeks.
If work is interrupted for longer periods, on the other hand, we recommend unscrewing the can from the **MapePUR Gun Standard** gun and cleaning it with **MapePUR Cleaner.**
To clean the gun, screw the can of **MapePUR Cleaner** to the collar in the **MapePUR Gun Standard** gun and spray the cleaner for a few seconds until all traces of foam have been removed from inside 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 Universal Foam M and **MapePUR Universal Foam G** are contained in pressurised cans and must be not be exposed to direct sunlight or 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 its compatibility with the substrate to be treated. Once hardened, the foam may only be removed mechanically.

YIELD

MapePUR Universal Foam M up to 45 litres*.
MapePUR Universal Foam G up to 45 litres*.

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

The yield of both products depends on the internal mixing of their components, the

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	MapePUR Universal Foam M	MapePUR Universal Foam G	MapePUR Cleaner
Consistency:	cream		liquid
Colour:	yellow		transparent
Inflammable:	yes		yes
APPLICATION DATA			
Application temperature:	+5°C to +30°C		+5°C to +30°C
Optimum can/contents temperature:	+20°C to +25°C		+20°C to +25°C
Flammability class (DIN 4102):	B3		
FINAL PERFORMANCE			
Dust dry (at +23°C and 50% R.H.) (minutes):	5-10		
In service temperature range:	-40°C to +90°C		
Minimum waiting time before cutting hardened foam (Ø 20 mm at +20°C and 60% R.H.):	25-30 mins		
Complete hardening time (h):	1½-5		
Free expansion (litres):	45		
Compressive strength (N/cm²):	4.5		
Tensile strength (N/cm²):	7.5		
Elongation at failure (%):	25		
Density (kg/m³):	22	17	
Shrinkage (after 24h at +20°C and 60% R.H.) (%):	1		
Water absorption after 24 h (%):	1		
Thermal conductivity at +20°C (DIN 52612) (W/m K):	0.039	0.036	
Soundproofing capacity (EN 12354-3 or ISO 717-1) (dB):	58		

Cleaning a foam filler extrusion gun

level of humidity and the temperature of the surrounding air and can.

PACKAGING
– **MapePUR Universal Foam M:** 750 ml can.
– **MapePUR Universal Foam G:** 750 ml can.
– **MapePUR Cleaner:** 500 ml can.

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

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.

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

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