

TECHNICAL DATA SHEET

PENOSIL Airtight Membrane 704

MS-polymer based liquid membrane for air- and weatherproofing. The product is ready to use and cures in the presence of moisture.

Can be used both, on horizontal and vertical surfaces. After curing, forms a seamless membrane that is completely air- and watertight, while still being permeable to water vapour. Excellent adhesion with many construction materials.

- Crack-bridging ability
- Permeable to water vapour
- Nearly no shrinkage
- High elasticity.
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- Air- and watertight.
- Easy and convenient application.
- Excellent adhesion to wide range of substrates.
- Non-corrosive to metals.
- Can be applied on damp surfaces.
- Over paintable with water-based paints.
- Does not contain solvents, silicones or isocyanates.
- Practically odourless.

Fields of application

- For air - and weathertight connections
- For window and door perimeter joints
- Under the window and door tin
- Penetrations through building envelope
- Protection against corrosion, moisture and weather conditions.
- Can be used both, on horizontal and vertical surfaces

Adhering

- PVC;
- metal;
- wood;
- masonry;
- concrete;
- ceramic tiles;
- EPDM;
- bitumen

Application instructions

Application conditions

Application temperature between +5°C and +40°C.

Surface preparation

The surfaces must be dry, clean from dust, loose particles and oil. Non-porous surfaces should be cleaned with solvent and a clean, non-fluffy cotton cloth. Solvent excess should be removed before evaporating with a clean cloth.

Application method

Using a caulking gun. Apply the liquid membrane on the joint with a caulking gun and smooth with a putty knife or flat brush so the seamless film is at least 1 mm thick.

Using a pneumatic spray gun. Liquid Hybrid Membrane can be applied by using a pneumatic spray gun, e.g. Cox Jetflow 3 600S. Adjusting the nozzle gives options to apply either as a bead or sprayed as a coating. For spraying, the nozzle is more open and less product is applied. For optimal use, the air pressure should be 4.6 bar and nozzle should be around 75% open. After spraying, if needed, smooth the membrane with a flat brush and make sure the minimum layer thickness (1 mm) is applied.

To ensure air- and weather tightness, the membrane needs to be applied at least 10 mm on the window/door frame, over the cured foam and at least 10 mm on the wall structure (both for caulking and pneumatic spray gun). To avoid mastic splashes on the frame, protect window and door frames with masking tape. The masking tapes should be removed right after application before the product starts curing. If needed, the product should be applied in 2 layers, to ensure seamless and airtight connection. The curing time before the second layer needs to be 12-24 hours. The final curing time depends on the layer thickness and relative humidity and temperature of the environment.

To achieve the expected results, the building engineering physics requirements for the whole solution must be taken into account, for example the need for a vapor tight layer in the warm layer of the structure.

Cleaning

Uncured sealant can be cleaned with solvents like white spirit, acetone or with special cleaning wipes. Cured sealant can be removed mechanically. If needed silicone remover should be used.

Technical data

Properties	Value	Unit
Basis	Hybrid	
Density (DIN 53 479-B)	1,42	g/ml
Sd value	1,74 (2 mm layer)	m
Water vapour diffusion resistance factor, μ -value	870	
Tack free time	25...35	min
Curing rate	2...3	mm/24h
Resistance to flow (ISO 7390)	0	mm
Service temperature	-40...+90	°C
Shelf life	12	months
Shore A hardness (ISO 868)	40...45	
Properties of cured sealant		
E-Modulus 100% (ISO 37)	0,75	N/mm ²
Tensile strength (ISO 37)	1,7	N/mm ²
Elongation at break (ISO 37)	>500	%

The values specified were obtained at +23 °C and 50% relative humidity, unless otherwise specified. These values may vary depending on environmental factors such as temperature, moisture and type of substrates.

Colour

Grey.

Package

600 ml foil package, 20 pcs in a box.

Storage conditions and shelf life

Guaranteed shelf life 12 months from the manufacturing date when stored in closed original package in a dry place and protected from direct sunlight at temperatures between +5 °C and +30 °C.

Limitations

- Do not use on bituminous substrates or on building materials which might bleed oils, plasticizers or solvents (e.g. natural rubber, chloroprene, EPDM, ...)
- There is no adhesion to PE, PP, PTFE (Teflon®).

- We don't recommend this product to be used for natural stone sealing
- Due to the wide variety of possible substrates, we recommend a preliminary compatibility and adherence test. If necessary, prime surfaces to improve adhesion.
- Due to the wide variety of influences during and after application, the customer must always test the product first.
- Please observe the expiration date!

Safety regulations

Ensure sufficient ventilation during application and wear necessary personal protective equipment. More specific safety information is available on the safety data sheet (SDS).

Note: The instructions in the present documentation are based on tests carried out by the manufacturer and are presented in good faith. Due to variations in materials and substrates as well as the various application possibilities that are beyond our control, the manufacturer is not liable for the results achieved. In any case, it is recommended to test the product suitability at the place of application. Manufacturer reserves the right to modify products without prior notice. This TDS replaces and supersedes all previous data sheets on the same product.