

TECHNICAL DATA SHEET

PENOSIL MS UltraFast AllWeather Crystal 789

Crystal-clear all-weather hybrid adhesive

One-component fast-curing transparent hybrid adhesive with exceptional performance, even in low temperatures. Designed for demanding applications, offering superior adhesion, durability, and environmental resistance.

Main benefits

- Extremely fast curing.
- Usable in temperatures as low as -15 °C.
- Maintains elasticity while forming a durable bond.
- Suitable for bonding various materials, both indoors and outdoors.
- Silicone, isocyanates and solvent free. Low VOC content. Non-corrosive and neutral odourless cure.
- Resistant to atmospheric agents (weather, extreme temperatures, ozone, UV ray exposure, overnight condensation, rain, etc.).
- Paintable (previous tests should be carried out).

Fields of application

- Construction and industrial applications where extremely fast curing is needed.
- Many different elastic bonding and sealing applications, in both indoor and outdoor.
- Quick bonding of materials such as wood, concrete, metal, and glass in interior and exterior applications.
- Assembly of components in manufacturing lines requiring fast handling and minimal downtime.
- Bonding lightweight structures in the production of appliances, HVAC systems, and furniture.
- Ideal for cold-weather installations, such as bonding materials for outdoor structures in winter.
- Adhesive for mounting fixtures or equipment in refrigerated or cold storage facilities.



Colour

Transparent.

Package

280 ml cartridge, 12 pcs in a box.
290 ml cartridge, 12 pcs in a box.
600 ml foil package, 20 pcs in a box.

Storage conditions and shelf life

Guaranteed storage time 12 months starting from the date of manufacture if stored in a closed original package in a dry place between +5 °C and +30 °C.

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Adhering

- Concrete
- Masonry
- Galvanized steel
- Glass
- Aluminium
- Anodized aluminium
- Wood
- Bricks
- Tiles

Technical classifications and certificates

- French VOC-emission class A+
- EMICODE® EC 1 Plus - very low emission

Technical data

Properties	Value	Unit
Basis	Hybrid	
Consistency	Paste	
Density (DIN 53 479-B)	1,05	g/ml
Extrusion rate (3 mm nozzle diameter and 6 bar pressure)	41	g/min
Curing speed (+23°C/RH 50%)	3,4	mm/24h
Curing speed (+23°C/RH 50%)	5,4	mm/72h
Curing speed (+23°C/RH 50%)	7,5	mm/week
Curing speed (-10°C)	2,1	mm/24h
Curing speed (-10°C)	2,7	mm/72h
Curing speed (-10°C)	3,7	mm/week
Curing speed (-18°C)	2,1	mm/24h
Curing speed (-18°C)	2,2	mm/72/h
Curing speed (-18°C)	2,9	mm/week
Application temperature	-15...+40	°C
Service temperature	-40...+80	°C
Shore A hardness (ISO 868)	64	
E-Modulus 100% (ISO 37)	2,6	N/mm ²
Tensile strength (ISO 37)	5,5	N/mm ²
Elongation at break (ISO 37)	>235	%

The parameters indicated have been measured at +23 °C and 50% relative air humidity.

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Application instructions

Application conditions

Application temperature between -15 °C and +40 °C.

Surface preparation

Substrates must be dry, clean and sound, free from dust, grease, loose particles and other contaminant which may affect the adhesion. Any release agent present must be removed. When using the adhesive in negative temperatures, avoid applying to frost-covered or frozen substrates.

Application method

Cartridge: cut off the threaded end of the cartridge and screw on the application nozzle for directing adhesive. Cut the threaded end in a way where a suitable opening for application is produced. Place the cartridge together with the applicator in the gun and fill the installation nozzle with adhesive, by repeatedly pressing the gun trigger.

Foil package: open the end of the foil pack and place the pack inside the gun so that the dosing nozzle keeps covering its open portion. Place the dosing nozzle on the open end and screw on the cap to close the tube. Cut the nozzle to create a suitable opening for dosing adhesive.

Apply adhesive in a continuous bead or in dots, depending on the substrate size and the desired bond area. Immediately press the substrates together firmly, ensuring uniform contact along the adhesive line. Support until adhesive is fully cured.

When applying the adhesive in negative temperatures, the following should be considered:

- While the adhesive is formulated for sub-zero applications, curing times and initial bond strength will be affected at temperatures below freezing.
- Adhesive will reach final strength more slowly in cold conditions, so allow adequate time for stabilization.
- Be cautious of condensation forming on substrates when working in cold environments, as this may affect adhesion quality.
- Store products in a warm environment (e.g., +5 °C to +30 °C) before use if the ambient temperature is below 0 °C.
- The adhesive may extrude more slowly from the cartridge in freezing temperatures. Cutting a larger nozzle opening can help improve application ease.

Cleaning

Uncured adhesive can be cleaned with solvents like white spirit, acetone or with Penosil Cleaning Wipes. Cured adhesive can be removed mechanically. If needed sealant remover should be used.

Limitations

- Do not use on building materials which might bleed oils, plasticizers or solvents.
- It is not suitable for direct application onto natural stone, PE, PP, PTFE, neoprene, asphalt or some bitumen containing materials.
- Paintability: Due to the large number of paints and varnishes available we strongly suggest a compatibility test before application.
- Due to the wide variety of possible substrates, we recommend a preliminary compatibility test.
- Please observe the expiration date!

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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.

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