

Silicone Potting Compound 029 (Thermally Conductive)

An advanced two-component thermally conductive material, curing in a condensation system, specially designed for the protection and encapsulation of electronic systems. Thanks to its condensation curing mechanism, the product forms a durable, damage-resistant rubber coating that effectively dissipates heat and protects against external factors such as moisture, dust, and vibrations.

Product features:

- ✓ thermal conductivity: ~2 W/mK,
- ✓ protects against moisture, dust, and external factors,
- ✓ dry to the touch after curing,
- ✓ does not detach from surfaces due to cyclic heating,
- ✓ easy to apply with even distribution,
- ✓ safe formula for delicate electronic surfaces.

Applications:

- ✓ telecommunications,
- ✓ motion control systems,
- ✓ automotive electronics,
- ✓ electronic and electrical systems,
- ✓ computers and peripheral devices,
- ✓ power supplies, energy converters, and power distribution systems.

Physicochemical properties (A & B)

Appearance	Gray liquid paste (A) Clear liquid (B)
Density at 25°C	~1.15 g/cm ³ (A) ~0.94 g/cm ³ (B)
Viscosity at 25°C	~1455 cP (A) ~0.53 cP (B)
pH	>7 (A)
Shelf life	12 months

Properties of the Mixture 100:10 (A+B)

Density at 25°C	~1,15 g/cm ³
Volatile content	3%
Working time at 25°C	~30 minutes
Curing time at 25°C	Max. 60h

Properties of the Mixture After 100h Curing

Consistency	Grey solid rubber
Thermal conductivity	~2 W/mK
Operating temperature range	-50°C to 180°C
Shore A hardness	63 [A]
Volume resistivity at 20±5°C and 65±5% RH (ASTM D257)	3.61*10 ¹⁶ Ω x cm
Surface resistivity at 20±5°C and 65±5% RH (ASTM D257)	1.75*10 ¹⁶ Ω
Dielectric strength (20-25°C, 65% RH) (PN-EN 60243-1)	>20.0 kV/mm
Dielectric loss factor tg δ (ASTM D150)	0.005 (10 ⁶ Hz)
Relative dielectric permeability ε _r (ASTM D150)	3 (10 ⁶ Hz)
Tracking resistance (PN-EN 60112:2003)	600 CTI [V]

Compatibility:

Silicone potting compound 029 is chemically neutral and compatible with most materials used in electronics, such as metals, plastics, and glass. Its thermal conductivity makes it indispensable in applications where heat dissipation is required.

Application method	
Without degassing	Yes
With degassing in a vacuum chamber	Yes

Usage instructions:

Restricted to professional users. Read SDS carefully prior to use.

Before application, ensure the surface is clean, degreased, and free of dust. Prepare the mixture of the two components (base A and catalyst B) by mixing them in a **100:10** ratio and thoroughly combining them manually or mechanically until a uniform mass is obtained. The components in the sets are pre-measured in the correct proportions: 100 g (100 g A + 10 g B) or 1 kg (1 kg A + 100 g B) to simplify the mixing process.

For the best results, it is recommended to place the prepared mass in a vacuum chamber (30–60 mm Hg vacuum) for about 5 minutes to remove air bubbles. During this process, the volume of the mass will initially increase slightly before stabilizing. After degassing, wait an additional 2 minutes before proceeding with application.

The prepared mixture should then be evenly poured over the system, filling all voids to ensure complete encapsulation. Next, leave the potted element to cure under preliminary conditions at room temperature for about 24 hours, during which the mass will harden. Ensure proper ventilation during this time, as ethyl alcohol may be released during curing.

Full curing takes approximately 100 hours at room temperature, during which the mass achieves its final mechanical and thermal properties, such as maximum mechanical strength. Once fully cured, the product forms a transparent, solid rubber that protects components from external factors.

If a vacuum chamber is not available, the mixture can also be used without the degassing process. However, the final result will depend on the care taken during application.

Package

Metal Box

100 g (ART.AGT-221) – 4 pcs.*
1 kg (ART.AGT-263) – 1 pc.*

*Quantity of pcs. in a bulk package

Storage:

Store in original packaging in dry warehouses at a temperature not exceeding 30°C.

Technical support:

AG TermoPasty provides technical support, answering questions about the technical specifications and applications of our products. Please contact us via email at info@termopasty.pl.

Note:

The data presented in this document reflect our current state of knowledge and describe the typical properties and applications of the product. However, the responsibility for determining the suitability of this product for specific applications lies with the user. AG TermoPasty is not liable for the results of the product's use, as the conditions of its application are beyond our control.

