# SEMICOSIL® 912

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## Room Temperature Curing Silicone Rubber (RTV-2)

SEMICOSIL® 912 is a pourable, addition-curing, 2-part silicone rubber that cures to a soft silicone gel when mixed with ELASTOSIL® CAT PT, ELASTOSIL® CAT PT-F or ELASTOSIL® CAT UV.

## Properties

- two-part, 10 : 1 mixing ratio
- low viscosity
- modular system allows flexible adjustment of pot life and curing time by selection among different catalysts (no lot binding between base and catalyst)
- fast curing at room temperature with Catalyst PT-F
- long pot life at room temperature with Catalyst PT
- extremely fast curing with Catalyst UV
- low hardness
- excellent tackiness

# Technical data

## Properties Uncured

| Property | Condition | Value | Method |
|---|---|---|---|
| Color | - | clear | - |
| Density | 25 °C | 0.97 g/cm$^3$ | - |
| Viscosity, dynamic | 25 °C | 1000 mPa·s | DIN EN ISO 3219 |

These figures are only intended as a guide and should not be used in preparing specifications.

## Catalyzed

| Property | Condition | Value | Method |
|---|---|---|---|
| Pot Life ELASTOSIL® CAT PT / at 23°C | - | 2 h | - |
| Pot Life ELASTOSIL® CAT PT-F / at 23°C | - | 5 min | - |
| Pot Life ELASTOSIL® CAT UV / at 23°C[(1)] | - | > 3 d | - |
| Mix ratio | - | 10 : 1 | - |
| Viscosity, dynamic of mix | - | 1000 mPa·s | ISO 3219 |
| Catalyst in component | - | ELASTOSIL® CAT | - |
| Gel time ELASTOSIL® CAT PT / at 23°C | 23 °C | 4 h | - |
| Gel time ELASTOSIL® CAT PT-F / at 23°C | 23 °C | 15 min | - |
| Gel time ELASTOSIL® CAT UV / at 23°C[(2)] | 23 °C | < 60 min | - |

[1]UV dose 1.5 J/cm$^2$, 250-350 nm
[2]UV dose 1.5 J/cm$^2$, 250-350 nm

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### Properties Cured

| Property | Condition | Value | Method |
|---|---|---|---|
| Density | 23 °C | 0.97 g/cm$^3$ | ISO 2781 |
| Color | - | clear | - |
| Penetration (9.38 g hollow cone) | - | 60 1/10mm | DIN ISO 2137 |

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All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

## Application details

Encapsulation of electronic components for the automotive and power electronics industries.

## Processing

Surface preparation
All surfaces must be clean and free of contaminants that will inhibit the cure of ???000010270???. Examples of inhibiting contaminants are sulfur containing materials, plasticizers, urethanes, amine containing materials and organometallic compounds – especially organotin compounds.

Mixing
???000010270??? contains the crosslinker, ELASTOSIL® CAT PT, PT-F or UV contains the catalyst. Even traces of catalyst may cause gelling of the component containing the crosslinker. Therefore tools (spatula, stirrers, etc.) used for handling the catalyst-containing component or the catalyzed compound must not come into contact with this component.

The two components should be thoroughly mixed at a 10 : 1 ratio by weight or volume. To eliminate any air introduced during dispensing or trapped under components or devices a vacuum encapsulation is recommended.

Curing
For curing an oven at elevated temperatures can be used.

Oven temperature Curing time
100°C 2 mm
Catalyst PT 30 min
Catalyst PT-F 10 min
Catalyst UV 2 min
# UV dose 1.5 J/cm2, 250-350nm

The system ???000010270??? / ELASTOSIL® CAT UV (10:1) is activated by direct UV irradiation. UV-irradiation should use emissions in the wavelength range between 250 and 350 nm.
Typically D-bulbs (Fe-doped, Hg-light sources) using ozone-free quartz should be used and are commercially available (see figure 2). H-bulbs with emissions below 250 nm are not recommended.

Curing time of the UV-active system ???000010270??? / ELASTOSIL® CAT UV (10:1) is highly dependent both on the intensity and dose of the UV-light and the spectral intensity distribution. The curing is also dependent on the layer thickness, the optical properties of the substrate and temperature. Increase of the temperature will fasten curing reaction.

## Packaging and storage

### Storage

SEMICOSIL® 912 should be stored dry and cool in the tightly closed original container.

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

## Safety notes

According to the latest findings, SEMICOSIL® 912 contains neither toxic nor aggressive substances which might require special handling precautions. General industrial hygiene regulations should be observed. Detailed safety information is contained in each Material Safety Data Sheet, which can be obtained from our sales offices.

## QR Code SEMICOSIL® 912

### For technical, quality or product safety questions, please contact:

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