

ELASTOSIL® N 2137



Moisture Curing Silicone Rubber (RTV-1)

ELASTOSIL® N 2137 is a non-slump, one-part silicone rubber for sealing and bonding applications. When exposed to air moisture it cures at room temperature to yield a permanently flexible silicone rubber with excellent heat resistance.

Fully vulcanized ELASTOSIL® N 2137 shows long-term stability against weathering, moisture and UV radiation. The silicone elastomer may continuously be exposed to constantly changing climatic conditions, UV radiation and temperature as high as 180 °C (356 °F) without damage.

Properties

Uncured:

- Non-slump
- Stiff pasty consistency
- By-product of curing: alcohol

Cured:

- Medium hardness
- Designed as gap sealant and bonding agent
- Improved resistance against motor oil and coolants
- Recommended service temperature range: -50 °C to +180 °C

Specific features

- Condensation-curing
- Electrically insulating
- Oil resistant
- One-component
- Thixotropic
- UV & weathering-resistant

Technical data

Properties Uncured

| Property | Condition | Value | Method |
|---------------------|------------------|------------------------|-----------------|
| Skin formation time | 23 °C 50 % r.h | 15 - 30 min | - |
| Colour | - | black | - |
| Curing speed | 23 °C 50 % r.h | 1.0 mm/d | - |
| Density | 23 °C 1013 hPa | 1.25 g/cm ³ | ISO 2811 |
| Viscosity, dynamic | 25 °C 0.5 1/S | approx. 1600000 mPa·s | DIN EN ISO 3219 |
| Viscosity, dynamic | 25 °C 25 1/S | approx. 160000 mPa·s | DIN EN ISO 3219 |

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

Properties Cured

Curing Conditions: 14 days at 23 °C and 50 % rel. humidity, 2 mm sheet, no post-curing.

| Property | Condition | Value | Method |
|---------------------|-----------|------------------------|---------------------|
| Color | - | black | - |
| Density (in water) | 23 °C | 1.27 g/cm ³ | DIN EN ISO 1183-1 A |
| Hardness Shore A | - | 40 | DIN ISO 48-4 |
| Tensile strength | - | 2.3 N/mm ² | ISO 37 type 1 |
| Elongation at break | - | 400 % | ISO 37 type 1 |

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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.

Applications

- Formed-In-Place-Gaskets (Wet Type)
- Heating & Cooling
- Machine Building

Application details

- General-purpose FIPG grade for technical applications

- Sealant for automotive applications

Processing

ELASTOSIL® N 2137 is a ready-to-use, one-part silicone rubber which starts curing when exposed to air moisture. Typical curing characteristics are given in the table "Properties Uncured".

As RTV-1 silicones require humidity for curing, free access of air moisture to the silicone rubber is essential. Additionally, the vulcanization time of ELASTOSIL® N 2137 can be greatly reduced by increasing the level of air's relative humidity. Please note that, unlike the initial skin formation, the total curing rate of RTV-1 silicones is limited by moisture's diffusion speed in silicone rubber.

Since increasing the curing temperature has just a minor effect both on the skin formation time and the curing speed, ELASTOSIL® N 2137 typically is vulcanized at room temperature.

After completion of the vulcanization the silicone elastomer may continuously be exposed to constantly changing climatic conditions, UV radiation and high temperature without damage. Cured ELASTOSIL® N 2137 usually shows good primerless adhesion to many substrates, e.g. glass, ceramics, metals, plastics, powder coatings and materials based on wood.

Detailed information about the processing of RTV-1 silicones is given in our brochure "ROOM TEMPERATURE VULCANIZING (RTV) SILICONES - MATERIAL AND PROCESSING GUIDELINES". We recommend running preliminary tests to optimize conditions for the particular application.

Removal:

If removal of the silicone from machines or dispensing equipment is necessary, white spirit or similar nonpolar solvents are recommended. However, cleaning ideally should take place before the silicone rubber is fully vulcanized. Cured silicone needs to be rubbed off or removed mechanically, if necessary in combination with a swelling agent (solvent) or a chemical silicone remover.

Packaging and storage

Storage

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

While curing ELASTOSIL® N 2137 releases a total of approx. 2.5 - 3 wt.% alcohol. These vapors should not be inhaled for long periods or in high concentrations. Hence ventilation of the work place is recommended.

Contact of the uncured silicone rubber with eyes and mucous membranes must be avoided as this can cause irritation. If, despite all protective measures, uncured silicone rubber comes into contact with the skin or eyes, irrigate the affected area immediately with copious amounts of water for several minutes. If the irritation continues, seek medical advice.

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

QR Code ELASTOSIL® N 2137



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

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