

ELASTOSIL[®] E41 TRANSPARENT



Moisture Curing Silicone Rubber (RTV-1)

ELASTOSIL[®] E41 TRANSPARENT is a flowable, one-component silicone rubber with excellent mechanical properties, which cures at room temperature under the influence of atmospheric moisture. It shows excellent mechanical properties, has good adhesion properties to many substrates, in particular on cured silicone rubber

Properties

- self-levelling
- solvent containing
- excellent adhesion on cured silicone rubber
- high-tear grade
- Recommended service temperature from -45 °C to 180 °C
- max. recommended short term peak temperature exposure 200°C

Specific features

- Adhesion: Good adhesion to metals, glass and ceramics
- Crosslinking Property: Acetoxy-cure
- Crosslinking Property: One-component
- Product Rheology: Self-levelling
- Specific Features: Excellent mechanical properties
- Specific Features: High tear-resistant
- Specific Features: One-component
- Vulcanizate: Excellent mechanical properties

Technical data

Properties Uncured

| Property | Condition | Value | Method |
|-------------------------------|------------------|------------------------|-------------------|
| Color | - | transparent | - |
| Density | 23 °C | 1.08 g/cm ³ | DIN EN ISO 2811-1 |
| Viscosity, dynamic D = 1 1/s | 25 °C | 100000 mPa·s | DIN EN ISO 3219 |
| Viscosity, dynamic D = 25 1/s | 25 °C | 80000 mPa·s | DIN EN ISO 3219 |
| Skin formation time | - | 10 - 20 min | internal method |
| Curing speed | 23 °C 50 % r.h | 12 h/mm | - |

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

Properties Cured

Curing conditions: 2mm, 14 days storage at 23 °C and 50 % RH.

| Property | Condition | Value | Method |
|------------------------------------|-----------|------------------------|---------------------|
| Color | - | transparent | - |
| Density in water | 23 °C | 1.12 g/cm ³ | DIN EN ISO 1183-1 A |
| Hardness Shore A | - | 40 | DIN ISO 48-4 |
| Tensile strength ⁽¹⁾ | - | 6.0 N/mm ² | ISO 37 type 1 |
| Elongation at break ⁽²⁾ | - | 350 % | ISO 37 type 1 |

¹Type 3 / 23°C / 2mm

²Type 3 / 23°C / 2mm

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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

- Luminaires

Application details

Multipurpose sealant and adhesive for general industry and electronics for FIPG applications. Particularly suitable as adhesive on cured rubber or silicone coated textiles like seam sealing.

Processing

ELASTOSIL® E41 TRANSPARENT 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 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. As increasing the curing temperature has just a minor effect both on the skin forming time and the curing speed, ELASTOSIL® E41 TRANSPARENT typically is vulcanized at room temperature. Heat curing is recommended only for applications where the silicone rubber is applied as a thin film (thickness less than 0.5 mm) in combination to temperatures not exceeding 80°C as otherwise blistering is likely to occur due to the quick release of acetic acid and solvent.

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® E1 TRANSPARENT usually shows good primerless adhesion to many substrates, e.g. glass, ceramics, metals, plastics and powder coatings and in particular to cured silicone rubber.

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. ELASTOSIL E41 TRANSPARENT shows good primerless adhesion to many substrates. We recommend running preliminary test to optimize conditions for the particular application

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

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® E41 TRANSPARENT



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

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