

# ELASTOSIL<sup>®</sup> E43 BLACK



## Moisture Curing Silicone Rubber (RTV-1)

ELASTOSIL<sup>®</sup> E43 BLACK is a self levelling, one-component acetoxy-cure silicone rubber 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 used as adhesive on cured silicone rubber

### Properties

- moderately self-levelling
- excellent adhesion on cured silicone rubber
- high-tear grade
- Recommended service temperature from -45 °C to +220 °C
- max. recommended short term peak temperature 250°C

### Specific features

- Excellent mechanical properties
- Solvent-free

## Technical data

### Properties Uncured

Property	Condition	Value	Method
Color	-	black	-
Density	-	1.09 g/cm <sup>3</sup>	DIN EN ISO 2811-1
Viscosity, dynamic D = 0,5 1/s	25 °C	250000 mPa·s	DIN EN ISO 3219
Viscosity, dynamic D = 25 1/s	25 °C	175000 mPa·s	DIN EN ISO 3219
Curing speed	23 °C   50 % r.h	12 h/mm	-
Skin formation time	25 °C   50 % r.h	10 min	-

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	-	1.10 g/cm <sup>3</sup>	DIN EN ISO 1183-1 A
Hardness Shore A	-	30	DIN ISO 48-4
Tensile strength <sup>(1)</sup>	-	6.5 N/mm <sup>2</sup>	ISO 37 type 1
Elongation at break <sup>(2)</sup>	-	500 %	ISO 37 type 1

<sup>1</sup>Type 3 / 23°C / 2mm

<sup>2</sup>Type 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

- Aerospace
- Bonding & Sealing
- DO NOT USE Small Appliances
- Household Applications
- Industrial Adhesives
- Small Appliances

- Solar Energy
- White Goods

## 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® E43 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® E43 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® E43 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), because otherwise blistering is likely to occur due to the quick release of acetic acid.

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® E43 usually shows good primerless adhesion to many substrates, e.g. glass, ceramics, metals, plastics and powder coatings.

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 E43 shows good primerless adhesion to many substrates. We recommend running preliminary tests to optimize conditions for the particular application.

**Detailed information about the processing of RTV-1 silicones is given in our brochure "ROOM TEMPERATURE VULCANIZING (RTV) SILICONES - MATERIAL AND PROCESSING GUIDELINES".**

## 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

During vulcanization of ELASTOSIL® E43, a total of 4% by weight of acetic acid is split off. These vapours should not be inhaled for long periods or in high concentration. Work areas should therefore be well ventilated. Contact of unvulcanized silicone rubber with eyes and mucous membranes must be avoided as this would cause irritation. However if it does happen, rinse the affected area thoroughly with water.

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® E43 BLACK



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

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