ELASTOSIL® E 951

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Moisture Curing Silicone Rubber (RTV-1)

ELASTOSIL® E 951 is a high strength one-component adhesive sealant designed for bonding silicone rubber to silicone rubber or substrates. ELASTOSIL® E 951 may also be used for forming high strength bonds between metal and glass. ELASTOSIL® E 951 adheres tenaciously to most substrates without the aid of a primer.

Properties

- One component, ready-to-use
- Excellent adhesion
- High strength

Technical data

Properties Uncured

Property	Condition	Value	Method
Viscosity, dynamic	25 °C	400000 cP	WSTM-2103
Appearance	-	Clear Paste	WSTM-2119
Skin Over Time	25 °C | 50 % r.h	20 min	-

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

Properties Cured

Cure conditions: 7 days / 25 °C.
ELASTOSIL E 951 releases acetic acid while curing. The fully cured product will be completely free of acetic acid odor.

Property	Condition	Value	Method
Density	25 °C	1.08 g/cm^3	-
Specific gravity	-	1.08 g/cm^3	-
Hardness Shore A	-	30	WSTM-2225
Tensile strength	-	4.5 mPa	-
Tensile strength	-	650 psi	-
Elongation	-	400 %	-
Tear strength	-	70 psi	ASTM D 624, Die B
Tear strength	-	12.3 kN/m	-

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Application details

ELASTOSIL® E 951 cures at room temperature when exposed to the humidity in the air. It forms a skin in less than 30 minutes, is tack free in an hour and normally cures overnight. Since this material requires moisture in the air to cure, the cure rate depends on the degree of open exposure. Acetic acid is liberated during cure which disappears when cure is complete. ELASTOSIL® E 951 adheres exceptionally well to various substrates including metals, glass, and vulcanized silicone rubber. The substrates should be clean. Primers are available to solve special adhesion problems.

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

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.

Processing

Processing

Recommended use levels of the product in hair conditioner formulations are 2.0 % to 10 %. In shampoos, a use level of 1.0 % to 2.5 % is recommended. The micro emulsion should be formulated at temperatures below 35 °C.

The emulsion needs to be stirred well before use.
asd5
dfew5
afevv2
slm8

Packaging and storage

Storage

The "Best use before end date" of each batch is shown on the Certificate of Analysis.

Storage beyond the date specified on the Certificate of Analysis 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

For specific information regarding safe handling of this material, please refer to the Safety Data Sheet.

QR Code ELASTOSIL® E 951

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

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