

ELASTOSIL® RT 745 "S"

Primerless Silicone Encapsulant

Characteristics

ELASTOSIL® RT 745 "S" is a pourable, thermally curable, addition-curing, two-part silicone rubber.

- Low risk of inhibition
- Rapid heat cure
- Primerless adhesion

Special characteristics

- Two-part, 1 : 1 mixing ratio
- Low viscosity
- Very low hardness

Application

- Encapsulation of electronic components
- Conformal coating of printed circuit boards and hybrid components.

Product data (uncured)

Property	Test method	Unit	Value	
			A	B
Component				
Color			Brownish	Translucent
Viscosity at 23 °C	ISO 3219	[mPa s]	1,000	1,000
Density at 23 °C		[g/cm ³]	0.97	0.97

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

Product data (catalyzed A+B)

Property	Test method	Unit	Value
Platinum-catalyst in component			A
Mixing ratio		A : B	1 : 1
Viscosity of mix, 23 °C	ISO 3219	[mPa s]	1,000
Pot life at 23 °C (up to 100,000 mPa s)		[h]	> 4

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

Product data (cured)

Property	Test method	Unit	Value
Colot			Translucent, brownish
Density at 23 °C	ISO 2781	[g/cm ³]	0.97
Hardness Shore 00	ASTM D 2240		37
Modulus at 100 % elongation	ISO 37	[N/mm ²]	0,05
Dielectric strength	IEC 243	[kV/mm]	23
Volume resistivity	IEC 93	[Ω cm]	10 ¹⁵
Dielectric constant	VDE 0303 T4 / 50 Hz	[ε _r]	2.9
Dissipation factor	VDE 0303 T4 / 50 Hz	[tan δ]	40 × 10 ⁻⁴
Tracking resistance	IEC 112	[CTI]	> 600

Cured for 30 min at 150 °C in a circulating air oven.

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Processing

Caution

Only components A and B with the **same lot number** may be processed together !

Surface preparation

All surfaces must be clean and free of contaminants that will inhibit the cure of ELASTOSIL® RT 745 "S". Examples of inhibiting contaminants are sulfur containing materials, plasticizers, urethanes, amine containing materials and organometallic compounds – especially organotin compounds.

If a substrate's ability to inhibit cure is unknown, a small scale test should be run to determine compatibility.

Mixing

Component A of ELASTOSIL® RT 745 "S" contains the platinum catalyst, component B the crosslinker. Even traces of the platinum catalyst may cause gelling of the component containing the crosslinker. Therefore tools (spatula, stirrers, etc.) used for handling the platinum-containing component or the catalyzed compound must not come into contact with this component.

The two components should be thoroughly mixed at a 1 : 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

ELASTOSIL® RT 745 "S" works best when cured at 100 °C or more depending on the size and heat sink properties of the components.

Temperature	Curing time, thickness 1 cm
80 °C	60 min
120 °C	10 min
150 °C	5 min

The reactivity can be adjusted within wide limits by adding Catalyst EP or Inhibitor PT 88 to suit the processing requirements of the particular application. Catalyst EP increases the reactivity, i. e., pot life and curing time are reduced.

Inhibitor PT 88 is a pot life extender and prolongs pot life and curing time.

Further information is given in our leaflet "Catalyst EP/Inhibitor PT88".

We recommend running preliminary tests to optimize conditions for the particular application.

Comprehensive Instructions are given in our leaflet "ELASTOSIL® RTV-2 Silicone Rubber - Processing."

Storage

ELASTOSIL® RT 745 "S" has a shelf life of at least 12 months when stored between 5 °C and 30 °C in the originally sealed container. The 'Best use before end' date of each batch appears 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 information

According to the latest findings addition-curing silicone rubber ELASTOSIL® RT 745 "S" contains neither toxic nor aggressive substances which would 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.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001. The Business Unit Elastomers of the Division Silicones is ISO/TS 16949 certified.

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