

ELASTOSIL[®] RT 628 A/B



Room Temperature Curing Silicone Rubber (RTV-2)

ELASTOSIL[®] RT 628 A/B is a flowable, addition-curing, 2-part silicone rubber for potting, encapsulation and casting applications. The product vulcanizes at room temperature or under heat to yield a permanently flexible silicone rubber with very good mechanical properties.

Cured ELASTOSIL[®] RT 628 A/B 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 temperatures as high as 180 °C (356 °F) without damage.

Properties

Uncured:

- 9 : 1 mixing ratio
- High extrusion rate
- Self-levelling
- Rapid heat cure possible

Cured:

- Medium hardness
- High tear resistance
- Recommended service temperature range: -50 °C to +180 °C

Specific features

- Addition Curing
- Electrically insulating
- Flowable
- Heat resistant
- Low viscosity
- Two-component
- UV & weathering-resistant

Technical data

Properties Uncured

Property	Condition	A	B	Method
Color	-	Black	White	-
Density	23 °C	1.33 g/cm ³	1.00 g/cm ³	DIN EN ISO 2811-2
Viscosity, dynamic ⁽¹⁾	23 °C	80000 mPa·s	650 mPa·s	DIN EN ISO 2555
Component containing the platinum catalyst	-	-	B	-

¹Brookfield measurement (component A: spindle 5 / 2.5 rpm; component B: spindle 1 / 2.5 rpm)

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

Catalyzed

All values given for a mixing ratio of A:B = 9:1 by weight.

Property	Condition	Value	Method
Viscosity, dynamic of mix ⁽¹⁾	23 °C	40000 mPa·s	DIN EN ISO 2555
Pot Life ⁽²⁾	23 °C	60 min	DIN EN ISO 2555
Curing time	23 °C	24 h	-

¹Brookfield measurement (spindle 6 / 2.5 rpm)

²Time to exceed 150,000 mPa·s, Brookfield measurement (spindle 6 / 2.5 rpm)

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Properties Cured

Mixing ratio A:B = 9:1 (by weight); curing conditions: 15 min. at 165 °C in a circulating air oven, 2 mm sheet, not pressed, no postcuring.

Property	Condition	Value	Method
Color	-	Dark gray	-
Density (in water)	23 °C	1.23 g/cm ³	DIN EN ISO 1183-1 A
Tear strength	-	12.5 N/mm	ASTM D 624 B
Hardness Shore A	-	54	DIN ISO 48-4
Tensile strength	-	3.2 N/mm ²	ISO 37 type 1
Elongation at break	-	220 %	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

- Hydroelectric Power Plants

Application details

- General purpose grade for casting applications
- Encapsulation of electrical components
- Elastic fixation of generator windings

Processing

Important!

Only A and B components with the same batch number should be processed together! In order to homogeneously redisperse fillers that might have settled during transport and storage, both component A and component B should be stirred well before use.

Surface preparation:

All surfaces must be clean and free of contaminants that will inhibit the cure of ELASTOSIL® RT 628 A/B. 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:

Temperature	Curing time
23 °C	24 h
100 °C	60 min.
150 °C	30 min.
165 °C	15 min.
200 °C	2-3 min.

Caution ! Component A of ELASTOSIL® RT 628 A/B contains the crosslinker, component B comprises the platinum catalyst. Since even traces of platinum catalyst may cause gelling of component A, all tools (e. g. spatula, stirrers, mixing cups etc.) used for handling either component B or the A/B mix must not come into contact with component A by mistake.

The two components should be thoroughly mixed at a 9 : 1 ratio by weight, either manually or preferably by automatic metering lines equipped with static or dynamic mixing devices.

Material application:

If applicable, a vacuum encapsulation is recommended in order to eliminate any air introduced during mixing and dispensing, or trapped under components and devices. Alternatively, component A and B can be deaerated individually prior use to remove absorbed air; to evacuate the air from the A/B mix is also possible. For this purpose applying a vacuum of 25-50 mbar for 10-15 min proved useful.

Curing:

Though curing by heat is possible, ELASTOSIL® RT 628 A/B is processed typically at room temperature. The level of Sh hardness usually reaches 75 % of the final value within 8 to 10 hours of curing. It is therefore possible to demould casted articles earlier than indicated by the curing time value given in the table "Catalyzed".

When cured under heat, the vulcanization time is highly dependent on temperature, size and heat sink properties of the respective substrates or of the assembly parts to be encapsulated, respectively. Typical curing temperatures and resulting curing times are given in adjacent table.

Furthermore the reactivity of ELASTOSIL® RT 628 A/B can be adjusted within wide limits by adding WACKER® Catalyst EP or WACKER® Inhibitor PT 88 to suit the processing requirements of the particular application. WACKER® Catalyst EP increases reactivity, i. e. pot life and curing time are reduced. WACKER® Inhibitor PT 88 is a pot life extender and thus prolongs pot life and curing time.

Detailed information about processing 2-part addition-curing 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 is fully vulcanized. Cured silicone rubber 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

Store in a dry and cool place.

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

According to latest findings, addition-curing silicone rubber ELASTOSIL® RT 628 A/B does not contain toxic or aggressive substances which would require special handling precautions.

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® RT 628 A/B



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

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