

ELASTOSIL[®] SUB C 2002 A/B



Room Temperature Curing Silicone Rubber (RTV-2)

ELASTOSIL[®] SUB C 2002 A/B is a low viscous, free flowing two-component, addition-curing silicone rubber specially designed for deepsea applications.

Properties

- Two-part system, 10:1 mixing ratio
- low viscous, free flowing
- fast and non-shrink cure at room temperature
- thermal acceleration with moderate temperature
- excellent long-term stability of the mechanical properties of the vulcanizate
- translucent A-component, yellow-pigmented B-component

Specific features

- Flexible at low (-40 °C) and high temperatures (+180 °C)
- Low viscosity

Technical data

Properties Uncured

Property	Condition	A	B	Method
Color	-	translucent	yellow	-
Density	-	1.15 g/cm ³	0.98 g/cm ³	DIN EN ISO 2811-1
Viscosity, dynamic	25 °C 0.5 1/s	18000 mPa·s	950 mPa·s	DIN EN ISO 3219
Viscosity, dynamic	25 °C 25 1/s	15000 mPa·s	-	DIN EN ISO 3219

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

Properties Catalyzed A+B

Property	Condition	Value	Method
Color	-	yellow	-
Viscosity, dynamic	25 °C 0.5 1/s	11000 mPa·s	DIN EN ISO 3219
Mix ratio	-	10 : 1	A : B
Pot Life ⁽¹⁾	25 °C	90 min	-

¹ISO 6721-10: time to 100 Pas

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Properties Cured

cured in press: 165°C / 10 min. Measured after 24 h at 23 °C.

Property	Condition	Value	Method
Density	-	1.14 g/cm ³	DIN EN ISO 1183-1 A
Tear strength	-	18 N/mm	based on ASTM D 624 B / 23°C / t = 2 mm
Hardness Shore A	-	32 - 39	DIN ISO 48-4
Tensile strength	-	5.1 N/mm ²	ISO 37 Type 1 / 23°C / t = 2 mm
Elongation at break	-	300 %	ISO 37 Type 1 / 23°C / t = 2 mm
Linear shrinkage	-	≤ 0.1 %	-
Thermal conductivity	-	≤ 0.2 W/m.K	DIN 52612

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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.

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be downloaded via WACKER web site <http://www.wacker.com>.

Application details

ELASTOSIL® SUB C 2002 A/B is the silicone rubber of choice to manufacture all types of thermal insulating devices

Main field of application: Thermal insulation material for marine applications, e.g. deep-sea constructions and subsea oil production equipment.

Processing

mixing

Important

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

Component A of ELASTOSIL® Sub C 2002 A/B contains the crosslinker, component B the platinum catalyst. 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 stirred-up before mixing at a 10 : 1 ratio by weight or volume. To eliminate any air eventually introduced during mixing, the A/B mix can be deaerated under vacuum prior use (25 - 50 mbar, 10 - 15 min). For processing ELASTOSIL® Sub C 2002 A/B in industrial scale, the use of automatic mixing and dispensing equipment is recommended.

curing

The curing time of addition-curing silicone rubber is highly dependent on temperature, size and heat sink properties of the components being potted or bonded.

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".

After completion of the vulcanization process the product may be exposed continuously and without damage to marine or subsea conditions, UV radiation, temperature levels as high as 150 °C (302 °F) and isostatic water pressure of up to 200 bar.

We recommend running preliminary tests to optimize conditions for the particular application. Comprehensive processing instructions are given in our leaflet "Processing RTV-2 Silicone Rubber". Bonding To achieve a good bonding of ELASTOSIL® Sub C 2002 A/B to sector-specific substrates, it is recommended to use a primer of the WACKER® Primer G series.

cleaning

If removal of silicone rubber from machines or dispensing equipment is necessary, white spirit or similar non-polar solvents are recommended. However, cleaning ideally should take place before the rubber is fully vulcanized. Cured silicone rubber can be removed by mechanical means, preferably in combination with a swelling agent (solvent).

Detailed processing instructions are given in our brochure "ROOM TEMPERATURE VULCANIZING (RTV) SILICONES - MATERIAL AND PROCESSING GUIDELINES"

surface

All surfaces must be clean and free of contaminants that will inhibit the cure of ELASTOSIL® Sub C 2002 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.

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

Components A and B of the addition-curing grade ELASTOSIL® SUB C 2002 A/B contain only constituents that over many years have proved to be neither toxic nor aggressive. Special handling precautions are therefore not required, i.e., only the general industrial hygiene regulations apply.

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® SUB C 2002 A/B



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

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