

ELASTOSIL[®] SUB C 2000 A/B



Room Temperature Curing Silicone Rubber (RTV-2)

ELASTOSIL[®] SUB C 2000 A/B is a pourable two-component, addition-curing silicone rubber specially designed for deep-sea applications.

Properties

- Two-part system, 10:1 mixing ratio
- Fast and non-shrink curing at room temperature
- Yellow-pigmented A-component, colorless B-component
- Excellent durability under subsea conditions

Specific features

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

Technical data

Properties Uncured

Property	Condition	A	B	Method
Color	-	yellow	colorless	-
Density	23 °C	1.08 g/cm ³	0.97 g/cm ³	DIN EN ISO 2811-1
Viscosity, dynamic	25 °C 0.5 1/s	55000 mPa·s	-	DIN EN ISO 3219
Viscosity, dynamic	25 °C 25 1/s	40000 mPa·s	-	DIN EN ISO 3219
Viscosity, dynamic	25 °C	-	400 mPa·s	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
Viscosity, dynamic	25 °C 0.5 1/s	30000 mPa·s	DIN EN ISO 3219
Mix ratio	-	10 : 1	A : B
Pot Life ⁽¹⁾	25 °C	90 - 130 min	ISO 6721-10

¹time to reach 100.000 mPas

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

Properties Cured

cured in press: 165°C / 10 min.

Property	Condition	Value	Method
Color	-	yellow	-
Density	23 °C	1.07 g/cm ³	DIN EN ISO 1183-1 A
Tear strength	-	≥ 15 N/mm	based on ASTM D 624 B / 23°C / t = 2 mm
Hardness Shore A	-	47	DIN ISO 48-4
Tensile strength	-	≥ 4.0 N/mm ²	ISO 37 Type 1 / 23°C / t = 2 mm
Elongation at break	-	≥ 250 %	ISO 37 Type 1 / 23°C / t = 2 mm
Linear shrinkage	-	≤ 0.1 %	-
Demoldable	-	≥ 12 h	-
Thermal conductivity	-	≤ 0.2 W/m.K	DIN 52612

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

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 2000 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

surface preparation

All surfaces must be clean and free of contaminants that will inhibit the cure of ELASTOSIL® Sub C 2000 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

Important

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

Component A of ELASTOSIL® Sub C 2000 A/B 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 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 2000 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 2000 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"

Packaging and storage

Storage

ELASTOSIL® SUB C 2000 A/B should be stored dry and cool in the tightly closed original 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.

QR Code ELASTOSIL® SUB C 2000 A/B



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

Wacker Chemie AG, Gisela-Stein-Strasse 1, 81671 Munich, Germany
productinformation@wacker.com, www.wacker.com

The data presented in this medium 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 medium 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 information provided by us does 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 product for a particular purpose.