LUMISIL® 903 A/B

LUMISIL®

Room Temperature Curing Silicone Rubber (RTV-2)

LUMISIL® 903 A/B is an addition-curing, low viscosity two-part silicone that cures to a flexible and highly transparent silicone rubber.

Properties

- two-part, 1 : 1 mixing ratio
- flowable
- rapid heat curing
- forms a highly transparent rubber on vulcanization

Technical data

Properties Uncured

Property	Condition	Value	Method
Appearance Component A	-	transparent	-
Appearance Component B	-	translucent	-
Density Component A	23 °C	1.02 g/cm^3	DIN EN ISO 2811-2
Density Component B	23 °C	1.03 g/cm^3	DIN EN ISO 2811-2
Viscosity, dynamic (D = 1 s^{-1}) Component A	25 °C	9000 mPa·s	ISO 3219
Viscosity, dynamic (D = 1 s^{-1}) Component B	25 °C	4500 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 (D = 1 s^{-1})	25 °C	6500 mPa·s	ISO 3219
Platinum catalyst in component	-	A	-
Mix ratio (pbw)	-	1:1	A : B
Pot Life (time to double initial viscosity)	23 °C	> 1 h	-
Gel time	70 °C	10 min	DIN 16945

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Properties Cured

Cured for 15 min at 165 °C.

Property	Condition	Value	Method
Appearance	-	transparent	-
Density	23 °C	1.02 g/cm^3	DIN EN ISO 1183-1 A
Hardness Shore A	-	55	DIN ISO 48-4
Tensile strength	-	5 N/mm^2	ISO 37 Type 1 / 23°C / t = 2 mm
Elongation at break	-	100 %	ISO 37 Type 1 / 23°C / t = 2 mm
Refractive index nD^{25}	25 °C	1.41	-
Tear strength	-	6 N/mm	ASTM D 624 B
Transmission (0.2mm)	450 - 800 nm	> 95 %	-
Transmission (2mm)	450 - 800 nm	> 90 %	-

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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.

Application details

LUMISIL® 903 A/B is a silicone for transparent potting in the lighting and electronics industry.

Processing

Surface preparation

All surfaces must be clean and free of contaminants that will inhibit the cure of LUMISIL® 903. 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 LUMISIL® 903 contains the platinum catalyst, component B the crosslinker. Even traces of the platinum catalyst may cause curing 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.

To eliminate any air introduced during mixing or trapped under components or devices a vacuum de-airing under a vacuum of 10 – 20 mm mercury for 5 – 10 min is recommended.

Curing

Curing time of addition-curing silicone rubber is highly dependent on temperature, silicone amount, size and heat sink properties of the substrate the silicone is applied on.
We recommend running preliminary tests to optimize conditions for the particular application.

Temperature	Curing time (6 mm)
100°C	<60 min
165°C	15 min

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

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 LUMISIL® 903 A/B

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

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