

ELASTOSIL[®] RT 2100

RTV Silicone Rubber

Characteristics

ELASTOSIL[®] RT 2100 is a room temperature vulcanizing silicone rubber. It is especially useful for electrical insulation applications such as potting, encapsulating, embedding, sealing and environmental protection. ELASTOSIL[®] RT 2100 is simple to handle and offers a balanced property profile.

Specifications

Typical Property values are not intended for use in the preparation of specifications. Please contact Wacker Silicones for assistance and recommendations before writing specifications on this product.

Product data

Property	Test Procedure	Value
Appearance	WSTM-2119	Red liquid
Viscosity, cP, 25 °C	WSTM-2103	12,000
Pot Life, 25 °C, hr	WSTM-2104	1.5 – 3.0
Tack-free Time, 25 °C, hr	WSTM-2105	8
Specific Gravity, 25 °C	WSTM-2314	1.49
Physicals, As Cured		
Durometer Hardness, Shore A	WSTM-2126	55
Tensile Strength, psi	WSTM-1160	755
Mpa		5.2
Elongation, %	WSTM-1160	130
Tear Strength, Die B, ppi	WSTM-1160	25
KN/m		4.4
Linear Coefficient of Thermal Expansion, 24 °C to 107 °C, cm/cm °C		1.06×10^{-4}
Linear Shrinkage, %		0.9
Thermal Conductivity, BTU•in/h•ft ² •°F	WSTM-1144	2.2
W/m•°C		0.32
Brittle Point, °C	WSTM-1151	-73
Electricals, As Cured		
Dielectric Strength,** V/mil	WSTM-1173	515
kV/mm		20.3
Dielectric Constant, 1 kHz	WSTM-1174	4.0
1 MHz	WSTM-1183	3.8
Volume Resistivity, ohm•cm, 23 °C	WSTM-1175	1.3×10^{15}
150 °C		5.0×10^{13}
Dissipation Factor, 1 kHz	WSTM-1175	0.007
1 MHz		0.002

*Cured 7 days, 25 °C and 50% relative humidity, catalyzed with 0.3 wt% Catalyst CA.

Features

- Low viscosity
- Deep section cure
- Excellent dielectric
- Outstanding thermal stability
- Good mechanical properties
- Excellent handling characteristics

Use Information

ELASTOSIL® RT 2100 should be stirred thoroughly just prior to use to redisperse any fluids or filler which may have separated during shipping and storage. The curing reaction begins immediately upon adding the catalyst. Crystals will occasionally form in catalyst CA; this is normal and does not indicate spoilage. The liquid catalyst may be carefully decanted and used, leaving the crystalline material behind. It may also be warmed gently (50-60 °C, 120-140 °F) until the crystals redissolve.

For Best results, ELASTOSIL® RT 2100 catalyzed with CA should be deaerated before pouring. This can be accomplished by placing it under a vacuum of mercury (27 inches, minimum) until the foam reaches its maximum height and breaks.

ELASTOSIL® RT 2100 becomes tack-free and cures rapidly once the working time has elapsed. The working time can be extended slightly by reducing the catalyst level. Catalyzed ELASTOSIL® RT 2100 may be stored for a day or more at -30 °C or lower immediately after addition of the catalyst to extend pot life.

Heat Resistance of ELASTOSIL® RT 2100

Properties*	7 Days 23 °C	50 Hrs 315 °C	100 Hrs 315 °C
Hardness, Shore A	60	67	70
Tensile Strength psi	755	635	570
MPa	5.2	4.4	3.9
Elongation, %	130	100	90

* Heat aged in an air-circulating oven.

Suggested Ratio: Base to Catalyst

ELASTOSIL® RT 2100 parts	Catalyst Parts	Working Time (hrs.)
100	CA-0.3	1.5-3

Catalyst Measuring Guide

ELASTOSIL® RT 2100		Catalyst CA	
Grams	Ounces	Grams	Drops
57	2	0.17	7
100	N/A	0.30	12
113	4	0.34	14
200	N/A	0.60	24
227	8	0.68	27
454	16	1.36	54
2,268	5 lbs.	6.8	N/A
4,536	10 lbs.	13.6	N/A

Curing

When catalyzed as recommended, ELASTOSIL® RT 2100 cures in deep sections within 24 hours at room temperature. Curing can be accelerated by moderate heating (up to 65 °C) but linear shrinkage may be greatly increased. When maximum retention of physical properties is required, or service temperature up to 260 °C is anticipated, it is advisable to cure ELASTOSIL RT 2100 for 7 days at room temperature prior to such exposure. Curing of ELASTOSIL RT 2100 is not inhibited by contact with materials normally encountered in RTV applications.

Bonding

- ELASTOSIL® RT 2100 can be bonded to a variety of substrates, including metals, glass, silicone resins and organic resins by using Primer G 418. Follow the procedures below:
- Clean and degrease all surfaces and follow by a wipe or rinse with acetone. Lightly roughen silicone rubber surfaces with fine sandpaper and wipe with acetone.
- Apply Primer G 418 to all surfaces except cured silicone rubber.
- Allow the primer to air-dry for at least 30 minutes at room temperature. A longer drying time may be needed if the relative humidity falls below 20 percent.
- Apply the catalyzed ELASTOSIL® RT 2100 to primed surfaces and allow it to cure in the normal manner.
- Primer surfaces, which have not been coated with RTV within 2 hours, should be cleaned with solvent and re-primed.

Storage and Shelf-Life

ELASTOSIL® RT 2100 has a shelf life of at least 12 months when stored below 32°C (90°F) in the tightly closed original container.

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 and Handling

For specific information regarding the safe handling of this material, please refer to the Material Safety Data Sheet.

Ordering Information

ELASTOSIL® RT 2100 is available in 5-gallon (50 lb.) pails and 55-gallon (500 lb.) drums. Orders may be placed directly to:

Wacker Silicones Division
3301 Sutton Road
Adrian, Michigan 49221-9397
Phone: 1 800 248-0063

To speak with a technical representative or for information on other Wacker products call toll free 1 800 248-0063.

Wacker Silicones Division is a domestic manufacturer of basic silicone materials for industry. Products include silicone fluids and emulsions, antifoam and release agents, room temperature vulcanizing (RTV) sealants and adhesives, heat curable rubber (HCR), liquid silicone rubber (LSR), masonry water repellents, paint raw materials, paper release coatings, and textile finishes.

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The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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

WACKER SILICONES
Wacker Chemical Corporation
3301 Sutton Road
Adrian, MI 49221
TEL: + 1 517 264 8500
FAX: + 1 517 264 8246

Email: customer care@wacker.com

www.wacker.com
silicones@wacker.com