

# Rhodorsil<sup>®</sup> RTV-1597

## Addition Cure Silicone Elastomer

**Description** Rhodorsil<sup>®</sup> RTV-1597 is a two component, medium hardness, high strength, addition cure, room temperature or heat curing silicone elastomer. Designed specifically for moldmaking applications, it offers low viscosity, high tear and cut resistance, and easy release for long lasting molds. Rhodorsil<sup>®</sup> RTV-1597 has high temperature and chemical resistance with excellent flexibility, low shrinkage, and well-defined detail reproduction, making it ideal for prototyping applications.

**Applications**

- Conventional production and prototype molds
- Finished rubber parts
- Stereolithography (SLA) molds
- Picture frames, mirrors, and furniture molding
- Giftware, furniture, and artistic molding
- Electronic encapsulation
- Epoxy laminate molding

### Typical Properties

<b>AS SUPPLIED</b> <b>Part A - Base Component</b> <ul style="list-style-type: none"> <li>• Color Translucent</li> <li>• Consistency Pourable</li> <li>• Viscosity, cP. (mPa.s)<sup>(1)</sup> 20,000</li> </ul> <b>Part B – Catalyst Component</b> <ul style="list-style-type: none"> <li>• Color Blue or Translucent</li> <li>• Viscosity, cP. (mPa.s) 10,000</li> </ul>		<b>CATALYZED PROPERTIES</b> Mixed at 24°C (75°F) and 50% R.H. <ul style="list-style-type: none"> <li>• Mix Ratio, A:B (Parts by weight) 10:1</li> <li>• Viscosity, cP. (mPa.s) 15,000</li> <li>• Pot Life, hrs.<sup>(2)</sup> 2</li> <li>• Work Life, minutes<sup>(3)</sup> 60</li> <li>• Demold Time, hrs. at R.T. 16-24</li> </ul>	
<b>CURED RUBBER</b> , Cured 7 days at 24°C (75°F) and 50% RH			
<b>PROPERTY</b>		<b>TEST METHOD</b>	
<ul style="list-style-type: none"> <li>• Specific Gravity 1.1</li> <li>• Hardness, Shore A 38</li> <li>• Tensile Strength, psi (N/mm<sup>2</sup>) 950 (6.5)</li> <li>• Elongation, % 550</li> <li>• Tear Strength, ppi (N/mm) 110 (19)</li> <li>• Linear Shrinkage, %<sup>(4)</sup>, 24 Hours &lt;0.1</li> <li>7 Days 0.1</li> <li>• Temperature Range, °C (°F) -55 to 249 (-65 to 400)</li> <li>• Coverage, cc. in/lb (cc/kg) 25.2 (909)</li> <li>• Thermal Conductivity, cal/cm<sup>2</sup>×sec×°C/cm 5.94 x 10<sup>-4</sup></li> <li>Btu/ft<sup>2</sup>×hr×°F/in 1.7</li> <li>W/m<sup>2</sup>K 0.25</li> </ul>			
<b>CURE SCHEDULE</b> , Time required to develop cured properties; 3 days at 24°C (75°F); 30 minutes at 100°C (212°F); 2 hours at 65°C (150°F); 15 minutes at 150°C (300°F).			
<small>(1) May become slightly thixotropic; this is quickly corrected by agitation. (2) Time at which material gels. (3) Time required to double initial catalyzed viscosity            (4) 8x8x0.25 in (20.3x20.3x0.64 cm) molded sheet, cured at room temperature</small>			
<b>TYPICAL ELECTRICAL PROPERTIES</b> <ul style="list-style-type: none"> <li>• Dielectric Strength, V/mil (kV/mm) 460(18.2)</li> <li>• Dielectric Constant, 1kHz 3.0</li> <li>• Dissipation Factor, 1kHz 0.004</li> <li>• Volume Resistivity, ohm×cm 7.1 x 10<sup>14</sup></li> </ul>			

Please note: The typical properties listed in this data sheet are not intended for use in preparing specifications for any particular application of Rhodorsil<sup>®</sup> silicone materials. Please contact our Technical Service Department for assistance in writing specifications

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## Storage and shelf life

When stored in its original unopened packaging, at a temperature of 24°C (75°F), **Rhodorsil<sup>®</sup> RTV-1597** may be stored for 18 months from the date of manufacture. Beyond this date, Bluestar Silicones no longer guarantees that the product meets the sales specifications.

## Safety

Please consult the Safety Data Sheet. The curing agent for this material can generate a flammable gas upon contact with acidic, basic, or oxidizing materials. Precautions to avoid contact of this curing agent with these materials should be exercised. To obtain a material safety data sheet for this product contact Bluestar at 800-356-7560.

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 EUROPE	 NORTH AMERICA	 LATIN AMERICA	 ASIA PACIFIC
<p><i>Bluestar Silicones France</i> 21 Avenue Georges Pompidou F69486 Lyon Cedex 03 FRANCE Tel. (33) 4 72 13 19 00 Fax (33) 4 72 13 19 88</p>	<p><i>Bluestar Silicones USA</i> CN 3000, 8 Cedar Brook Drive, Cranbury, NJ 08512-3000 Tel. (1) 609 860 3100 Fax (1) 609 860 8078</p>	<p><i>Bluestar Silicones Brazil Ltda.</i> Av. Maria Coelho Aguiar, 215 Bloco B - 2o.andar - Parte 1 CEP 05804-902-Sao Paulo/SP Brazil Tel. (55) 11 3741 8860 Fax (55) 11 3741 7718</p>	<p><i>Bluestar Silicones Hong Kong</i> Trading Co. Ltd. Unit C, 18/F Manulife Tower 169 Electric Road North Point-Hong Kong Tel. (852) 3106 8200 Fax (852) 2979 0241</p>

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