

# Bluesil™ RTV 1597

October 2017

## Addition Cure Silicone Elastomer

**Description** **Bluesil™ RTV 1597** is a two component, medium hardness, high strength, addition cure, room temperature or heating curing silicone elastomer. Designed specifically for moldmaking application, it offers low viscosity, high tear and cut resistance, and easy release for long lasting molds.

**Bluesil™ 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
  - Finish 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>CATALYZED PROPERTIES</b>         |        |
|---|---------------------|-------------------------------------|--------|
| <u>Part A - Base Component</u>  |                     | Mixed at 24°C (75°F) and 50% R.H.   |        |
| • Color   | Translucent         | • Mix Ratio, A:B (Parts by weight)  | 10:1   |
| • Consistency   | Pourable            | • Viscosity, cP. (mPa.s)            | 15,000 |
| • Viscosity, cP. (mPa.s) <sup>(1)</sup>   | 20,000              | • Pot Life, hrs. <sup>(2)</sup>     | 2      |
| <u>Part B - Catalyst Component</u>  |                     | • Work Life, minutes <sup>(3)</sup> | 60     |
| • Color   | Blue or Translucent | • Demold Time, hrs. at R.T.         | 16-24  |
| • Viscosity, cP. (mPa.s)  | 10,000              |                                     |        |
| <b>CURED RUBBER, Cured 7 days at 24°C (75°F) and 50% RH</b>   |                     |                                     |        |
| PROPERTY  | TEST METHOD         | VALUE                               |        |
| • Specific Gravity  |                     | 1.1                                 |        |
| • Hardness, Shore A   | ASTM D2240          | 38                                  |        |
| • Tensile Strength, psi (N/mm <sup>2</sup> )  | ASTM D412           | 950 (6.5)                           |        |
| • Elongation, %   | ASTM D412           | 550                                 |        |
| • Tear Strength, ppi (N/mm)   | ASTM D624, Die B    | 110 (19)                            |        |
| • Linear Shrinkage, % <sup>(4)</sup> , 24 Hours   |                     | <0.1                                |        |
|   |                     | 0.1                                 |        |
| • Temperature Range, °C (°F)  |                     | -55 to 249 (-65 to 400)             |        |
| • Coverage, cc. in/lb (cc/kg)   |                     | 25.2 (909)                          |        |
| • Thermal Conductivity, cal/cm <sup>2</sup> ×sec×°C/cm  |                     | 5.94 x 10 <sup>-4</sup>             |        |
|   |                     | 1.7                                 |        |
|   |                     | 0.25                                |        |
| <b>CURE SCHEDULE, Time required to develop cured properties;</b>  |                     |                                     |        |
| 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). |                     |                                     |        |
| (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                               |                     |                                     |        |
| <b>TYPICAL ELECTRICAL PROPERTIES</b>  |                     |                                     |        |
| • Dielectric Strength, V/mil (kV/mm)  |                     | 460(18.2)                           |        |
| • Dielectric Constant, 1kHz   |                     | 3.0                                 |        |
| • Dissipation Factor, 1kHz  |                     | 0.004                               |        |
| • Volume Resistivity, ohm×cm  |                     | 7.1 x 10 <sup>14</sup>              |        |

Please note: The typical properties listed in this data sheet are not intended for use in preparing specifications for any particular application of BLUESIL™ silicone materials. Please contact our Technical Service Department for assistance in writing specification.

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## Storage and shelf life

When stored in its original packaging at a temperature of 24°C (75°F), **Bluesil™ RTV 1597** may be stored for up to 18 months from its 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 of **Bluesil™ RTV 1597**. The curing agent for this material can generate flammable gas upon contact with acidic, basic, or oxidizing materials. Precautions to avoid contact of this curing agent with these materials should be exercised.

## Packaging

**Bluesil™ RTV 1597** is available in 18kg and 180 kg containers.

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|  EUROPE  |  NORTH AMERICA  |  LATIN AMERICA   |  ASIA PACIFIC  |
|---|--|---|---|
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