



# STYCAST 82 SI RS W1 RR

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## PRODUCT DESCRIPTION

STYCAST 82 SI RS W1 RR provides the following product characteristics:

<b>Technology</b>	Silicone
<b>Appearance</b>	Black
<b>Components</b>	Two component - requires mixing
<b>Mix Ratio, by weight - Part A: Part B</b>	10 : 1
<b>Operating Temperature - Continuous</b>	-50 to +260 °C
<b>Operating Temperature - Intermittent</b>	-50 to +315 °C
<b>Product Benefits</b>	<ul style="list-style-type: none"><li>• Lightweight</li><li>• Ease of use</li><li>• Low thermal conductivity</li><li>• High temperature resistance</li><li>• Non-corrosive</li><li>• Can be cured in thick sections</li></ul>
<b>Cure</b>	Heat cure
<b>Application</b>	Assembly
<b>Typical Assembly Applications</b>	Bonding lightweight molded parts and thermal barriers for aerospace applications

STYCAST 82 SI RS W1 RR is a lightweight syntactic foam designed for aerospace applications requiring high strength, high elongation and lightweight. The special microballoons used in this system allows this material to withstand high compressive loads and make it suitable for processing in moderate shear machinery.

Possible applications for STYCAST 82 SI-RS-W1 RR include lightweight molded parts and thermal barriers for aerospace requiring high compressive strength and 260°C to 315°C temperature resistance.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

### Part A Properties

Viscosity @ 25 °C, mPa·s (cP)	375
Flash Point - See SDS	

### Part B Properties

Viscosity @ 25 °C, mPa·s (cP)	2.35
Flash Point - See SDS	

### Mixed Properties

Mixed Viscosity @ 25 °C, mPa·s (cP)	240
Pot Life @ 25 °C, hours	4
Shelf Life @ 18 to 25 °C (from date of manufacture), days	183
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Cure Schedule

2.25 hours @ 150°C

### Post Cure

1 hour @ 200°C

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties

Hardness, Shore A	60
Tensile Strength	N/mm <sup>2</sup> 1.85 (psi) (268)
Tensile Elongation, %	157.5
Thermal Conductivity, W/(m·K)	0.163
Coefficient of Linear Thermal Expansion, ppm/°C	185
Dry heat Resistance, Shore A (maximum)	65
Weight Loss, %, (maximum)	4

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Miscellaneous:

Tensile Lap Shear Strength (minimum)	N/mm <sup>2</sup> 1.0 (psi) (145)
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## DIRECTIONS FOR USE

1. Weight out the required amount of Parts A and B into an appropriate mixing vessel. Thoroughly mix the two parts until a uniform mixture is obtained.
2. High shear mixing should be avoided, since this may cause destruction of the microballoons.
3. To ensure an air-free casting, the catalyzed mixture should be deaired in a vacuum chamber at 3 to 4 kPa.
4. STYCAST 82 SI RS W1 RR can be cured in confined spaces as well as in contact with air over a broad range of temperatures.
5. The cure of this silicone product may be inhibited through contact with certain contaminants.
6. Avoid contact with sulphur or sulphur containing materials, nitrogen containing materials, RTV silicone catalysts and heavy metal salts.
7. In addition, molds, mixing equipment, oven, and other apparatus that will be used in the preparation and curing of this product should be free of inhibiting contaminants.

### Not for product specifications

The technical data contained herein are intended as reference only. Please contact HITEK for assistance and recommendations on specifications for this product.

## Storage

### Optimal Storage / Shelf life: 18 to 25 °C / 6 months

Store in original, tightly covered containers in clean, dry areas. Storage information may be indicated on the product container labeling.



Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

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Reference 1

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[www.hitek-ltd.co.uk](http://www.hitek-ltd.co.uk)  
+44 (0)1724 851678



**HITEK**  
ELECTRONIC MATERIALS LTD

Americas  
+1.888.943.6535

Europe  
+32.1457.5611

Asia  
+86.21.3898.4800

**For the most direct access to local sales and technical support visit: [www.henkel.com/electronics](http://www.henkel.com/electronics)**