Technical Data Sheet

LOCTITE STYCAST 82 SIRSW1

July 2022

PRODUCT DESCRIPTION

LOCTITE STYCAST 82 SIRSW1 provides the following product characteristics:

Technology	Silicone
Appearance	Black
Components	Two components - requires mixing
Mix Ratio, by weight - Part A: Part B	10 : 1
Operating Temperature - Continuous	-50 to +260 ºC
Operating Temperature - Intermittent	-50 to +315 ºC
Product Benefits	• Lightweight • Ease of use • Low thermal conductivity • High temperature resistance • Non-corrosive • Can be cured in thick sections
Cure	Heat cure
Application	Assembly
Typical Assembly Applications	Bonding lightweight molded parts and thermal barriers for aerospace applications

LOCTITE STYCAST 82 SIRSW1 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.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Viscosity @ 25 °C, mPa·s (cP)	375,000
Flash Point - See SDS	

Part B Properties

Viscosity @ 25 °C, mPa·s (cP)	2,350
Flash Point - See SDS	

Mixed Properties

Mixed Viscosity @ 25 ºC, mPa·s (cP)	240,000
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 specific 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/mm² (psi)	1.85 (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/mm² (psi)	1.0 (145)

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

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. LOCTITE STYCAST 82 SIRSW1 can be cured in confined spares 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 .
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 your local Henkel representative for assistance and recommendations on the specifications of this product.

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

Optimal Storage : 18 to 25 °C

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 Henkel Representative.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb/F
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
N/mm² = MPa
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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Note:
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