



STYCAST™ 4850FT™/Catalyst 50™

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PRODUCT DESCRIPTION

STYCAST™ 4850FT™/Catalyst 50™ provides the following product characteristics:

Technology	Silicone
Appearance (Part A)	White
Appearance (Catalyst)	Clear
Mix Ratio, by weight - Amount of Catalyst 50 per 100 parts of Stycast™4850™	0.15 : 0.3
Product Benefits	• Flexible • General purpose • High temperature resistance • Excellent electrical properties • Room temperature cure • Readily pourable • Low stress
Cure	Heat cure
Application	Encapsulant
Operating Temperature	-65 to 260 °C

STYCAST™ 4850FT™/Catalyst 50™ is a silicone rubber potting and encapsulation compound. This product is also used to make flexible molds.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties 4850™

Viscosity, Brookfield, 25 °C, mPa·s (cP)	30,000 to 50,000
Density, ISO 1183, g/cm³	1.6 to 1.72
Shelf Life @ 25°C (from date of manufacture), months	3
Flash Point - See MSDS	

Part B Properties Catalyst 50™

Viscosity @ 25 °C, mPa·s (cP)	85
Flash Point - See MSDS	

Mixed Properties

Mixed Viscosity, mPa·s (cP)	40,000
Density, ISO 1183, g/cm³	1.66
Working Time, 100 g mass, @ 25°C, minutes	60
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

16 to 24 hours @ 25°C or
2 to 4 hours @ 65°C

Post Cure

1 to 2 hours @ 25 to 30°C increments up to the highest expected use temperature is recommended to properly condition the silicone rubber

This RTV silicone product is based on condensation cure chemistry and will cure in contact with most materials without cure inhibition. This product is not recommended for use in closed molds or sealed molds which could prevent the escape of reaction by-products required to complete the cure. In addition, catalysts used to cure this product may cause corrosion of copper and other sensitive metals.

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:

Shore Hardness, ISO 868, Shore A	60
Tensile Strength, ISO 37	N/mm² 5.5 (psi) (800)
Elongation, ISO 37, %	140

Electrical Properties:

Volume Resistivity, ohm/cm @ 25°C	>1×10 ¹⁴
Dielectric Strength, kV/mm	27.6
Dielectric Constant @ 1mHz	4.0
Dissipation Factor @ 1mHz	0.02

GENERAL INFORMATION

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



DIRECTIONS FOR USE

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part.
2. Some separation of components is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use.
3. Power mixing is preferred to ensure a homogeneous product.
4. Accurately weigh Stycast™ 4850™ and Catalyst 50™ into a clean container in the recommended ratio.
5. To facilitate the addition of catalyst, the use of a medicine dropper which has been previously calibrated to determine the number of drops per gram is recommended.
6. Working life and cure time are shortened as the amount of catalyst is increased.
7. Low catalyst concentrations are recommended for applications requiring thick sections or use at temperatures in excess of 125°C.
8. Blend components by hand, using a kneading motion, for 2 to 3 minutes and scrape the bottom and sides of the mixing container frequently to produce a uniform mixture.
9. If possible, power mix for an additional 2 to 3 minutes. Avoid high mixing speeds which could entrap excessive amounts of air or cause overheating of the mixture resulting in reduced working life.
10. To ensure a void-free embedment, vacuum deairing should be used to remove any entrapped air introduced during the mixing operation.
11. Vacuum deair mixture at 1 to 5 mm mercury. The foam will rise several times the liquid height and then subside.
12. Continue vacuum deairing until most of the bubbling has ceased. This usually takes 3 to 10 minutes.
13. In general, silicone materials exhibit outstanding release properties and will not adhere to most substrates.
14. If adhesion is required, apply a thin, uniform coating of PRIMER S 11.
15. Allow PRIMER S 11 to dry for 30 to 60 minutes at room temperature before applying this silicone material.
16. Pour mixture into cavity or mold.
17. Gentle warming of the mold or assembly reduces the viscosity. This improves the flow of the material into the unit having intricate shapes or tightly packed coils or components.
18. Further vacuum deairing in the mold may be required for critical applications.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 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 Technical Service Center or Customer Service Representative.

Not for product specifications

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

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Note

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Reference 0.0