Technical Data Sheet

STYCAST 2851FT

October 2015

PRODUCT DESCRIPTION

LOCTITE STYCAST 2851FT provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat cure
Product Benefits	• One component • Solvent-free • 100% Solids • Low temperature cure • High thermal conductivity • Low thermal expansion
Operating Temperature	170ºC
Application	Encapsulant

LOCTITE STYCAST 2851FT is recommended for encapsulation of components that require heat dissipation and thermal shock properties . It has a low coefficient of thermal expansion and exhibits excellent resistance to a wide variety of industrial chemicals and solvents.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, mPa·s (cP):	
@ 25°C	85,000
@ °C	33,000
Density, g/cm³	2.3
Shelf Life @ 0 to 8°C (from date of manufacture), days	180
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

1 hour @ 120°C
2 hours @ 110°C
5 hours @ 90°C

Cure at any one of the recommended cure schedules.

For optimum smooth surface, cure temperature should not exceed 110°C.

A post cure of 4 hours @ 150°C will improve final end-properties.

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 D, Minimum	90
Thermal Conductivity , W/(m-K)	1.36
Coefficient of Linear Thermal Expansion, ppm/ºC	31
Moisture Absorption, 24 hrs immersion, %	0.06
Machinability	Poor (must be ground)
Heat Distortion Temperature, ºC	102
Arc Resistance, seconds	207

Electrical Properties

Volume Resistivity @ 25 °C, ohm-cm	1×10^{15}
Dielectric Constant / Dissipation Factor @ 1 MHz	5.2/0.02

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Impact Strength , J/cm		0.16
Compressive Strength	N/mm² (psi)	130 (18,855)
Flexural Strength	N/mm² (psi)	93 (13,488)
Tensile Strength	N/mm² (psi)	50 (7,250)

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. For applications requiring a lower viscosity, very slight warming will reduce viscosity significantly (e.g., to 45ºC).
2. Do not leave the material at a warm temperature any longer than necessary as it will shorten its shelf life considerably.
3. Mix the entire contents of to a uniform consistency before removing material.
4. Power mixing is preferred.
5. In the event that release from the mold is desired, a coating of paste wax or a silicone mold release such as MOLD RELEASE 122S is recommended.

Storage

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

Optimal Storage : 0 to 8 °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.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa = N/mm²
MPa x 145 = psi
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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