



'STYCAST 2651 MM

Low Viscosity, General Purpose Epoxy Encapsulant

Key Feature:	Benefit:
<ul style="list-style-type: none"> General purpose 	<ul style="list-style-type: none"> Used in a wide variety of applications
<ul style="list-style-type: none"> Machinability 	<ul style="list-style-type: none"> Casting can be cut, drilled and tapped easily
<ul style="list-style-type: none"> Low viscosity 	<ul style="list-style-type: none"> Ease of use

Product Description:

STYCAST 2651 MM is a filled, low viscosity, general purpose, epoxy encapsulant. STYCAST 2651 MM contains a soft filler that both reduces abrasion in meter/mix equipment and enhances machinability in the cured product.

Applications:

STYCAST 2651 MM is designed as a general purpose encapsulant which requires low viscosity and low abrasion. It is especially useful for machine dispensing and for parts that require post molding machining.

Instructions For Use:

Thoroughly read the information concerning health and safety contained in this bulletin before using. Observe all precautionary statements that appear on the product label and/or contained in individual Material Safety Data Sheets (MSDS).

To ensure the long term performance of the potted or encapsulated electrical / electronic assembly, complete cleaning of components and substrates should be performed to remove contamination such as dust, moisture, salt, and oils which can cause electrical failure, poor adhesion or corrosion in an embedded part.

Properties of Material As Supplied:

Property	Test Method	Unit	Value
Chemical Type			Epoxy
Appearance	Visual		Black liquid
Density	TP-13	g/cm ³	1.61
Brookfield Viscosity	TP-10 or TP-11 5 rpm # 5	Pa.s cP	35 35,000

Choice of Curing Agents

Curing agent	Catalyst 9	Catalyst 11	Catalyst 23 LV
Description	General purpose with good chemical resistance and physical strength.	Long pot life, excellent chemical resistance, good physical and chemical properties at elevated temperatures.	Low color, low viscosity, long pot life. Excellent, thermal shock and impact resistance. Excellent low temperature properties and adhesion to glass.
Type of cure	Room	Heat	Room
Viscosity Pa.s cP	0.080 to 0.105 80 to 105	0.035 to 0.060 @ 65 °C 35 to 60 @ 65 °C	0.020 to 0.030 20 to 30

Properties of Material As Mixed:

Property	Test Method	Unit	Value		
			Catalyst 9	Catalyst 11	Catalyst 23 LV
Mix Ratio - Amount of Catalyst per 100 parts of STYCAST 2651 MM		By Weight	7	8.5	15
		By Volume	12	13	24.5
Working Life (100 g @ 25°C)	ERF 13-70		45 minutes	>4 hours	60 minutes
Density	TP-13	g/cm ³	1.58	1.59	1.52
Brookfield Viscosity	TP-10 or TP-11	Pa.s	14	13	-
		cP	14,000	13,000	-

Some filler settling 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. Power mixing is preferred to ensure a homogeneous product.

Accurately weigh resin and hardener into a clean container in the recommended ratio. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.

Blend components by hand, using a kneading motion, for 2-3 minutes. Scrape the bottom and sides of the mixing container frequently to produce a uniform mixture. If possible, power mix for an additional 2-3 minutes. Avoid high mixing speeds which could entrap excessive amounts of air or cause overheating of the mixture resulting in reduced working life.

To ensure a void-free embedment, vacuum deairing or degassing should be performed to remove any entrapped air introduced during the mixing operation. Pump-down or pull vacuum on the mixture to achieve an ultimate vacuum or absolute pressure of 1- 5 torr or mm Hg. The foam will rise several times the liquid height and then subside. Continue vacuum deairing until most of the bubbling has ceased. This usually requires 3-10 minutes.

To facilitate deairing in difficult to deair materials, add 1-3 drops of an air release agent, such as ANTIFOAM 88, into 100 grams of mixture. Gentle warming will also help, but working life will be shortened.

Pour mixture into cavity or mold. 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. Further vacuum deairing in the mold may be required for critical applications.

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