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ISO-9001-2008 Certified

TECHNICAL BULLETIN

SILCAST-454M-6
THERMALLY CONDUCTIVE
RTV SILICONE POTTING COMPOUND

SC-454M-6 is a thermally conductive, low viscosity, condensation cure, RTV silicone potting or encapsulating compound. It is readily pourable and can cure at room temperature. The cured resin has a very good flexibility with excellent electrical properties and high temperature resistance.

SC-454M-6 is designed for potting and encapsulation of electrical/electronics components that require the dissipation of heat and the high temperature properties and low stress of a silicone compound. The cured material may be knife-cut for replacement of components and new compound may be poured in place and cured to re-form tight seal.

TYPICAL HANDLING PROPERTIES:

SILCAST	PART A
CATALYST	PART B
Mix ratio by weight, (Silcast/Catalyst)	100/3 to 5
Mixed Viscosity at 25°C, cp	4000-6000
Pot Life (500 grams) at 25°C, min	30-60
Recommended Cure	24 hrs/25°C

TYPICAL CURED PROPERTIES AFTER RECOMMENDED CURE:
(Tested @ 25°C unless otherwise indicated)

Color	Red
Specific Gravity	2.2
Hardness, Shore A	70
Thermal Conductivity, W/m°K	1.4
Tensile Strength, psi	650
Elongation, %	70-80
Service Temperature range	-65°C to 250°C
Coefficient of Linear Thermal Expansion, 10^{-6}/°C	
From -55°C to 25°C	150
Dielectric Strength, Volts/mil (3 mm thick)	540
Dielectric Constant at 1 kHz	5.8
Dissipation Factor at 1 kHz	0.01
Volume Resistivity, ohm-cm	$6x10^{14}$

INSTRUCTIONS FOR USE:
Some filler settlement may occur during shipping and storage. Mix well the contents every time before removing material.

1. To use, mix, at room temperature, 100 grams of SC-454M-6 with 3 to 5 grams of SH-454M-6.
2. Mix well until uniform in consistency and vacuum degasses.
3. Cure as recommended achieving the desired properties.
4. Typical cured properties were determined using recommended cure schedule. Some difference in properties may occur with other cure schedules.

WARNING!
Although the system contains low volatility materials, care should be taken in handling. Adequate ventilation of work place and ovens is essential. These materials may cause injury to the skin following prolonged or repeated contact and dermatitis in susceptible individuals. In case of skin contact, wash thoroughly with soap and water. For eyes, flush immediately with plenty of water for at least 10 minutes and seek medical attention. Refer to Material Safety Data Sheet for additional health and safety information.

SHELF LIFE:
The shelf life of these materials is six months when stored in unopened containers at an average temperature of 25°C.