

EMSD-526A&B

Thermally Conductive Silicone Encapsulant

PRODUCT DESCRIPTION

EMSD-526A&B is an additional cure silicone encapsulant. The product consists of A and B. When the two parts is mixed in 1:1ratio, a silicone elastomer will be formed as the composition cures up. The curing process can take place under ambient condition. It can also be accelerated under elevated temperature. EMSD-526A&B features good flame resistant property, high thermal conductivity, ease of use, and good protection to electrical/electronic parts.

TECHNICAL PROPERTIES

Prior to Cure	
Appearance	A Part Black B Part White
Viscosity , cP	A Part <4500 B Part <4500
Specific Gravity , g/cm ³	1.57
Ratio 1:1	Easy to operate, little measurement error

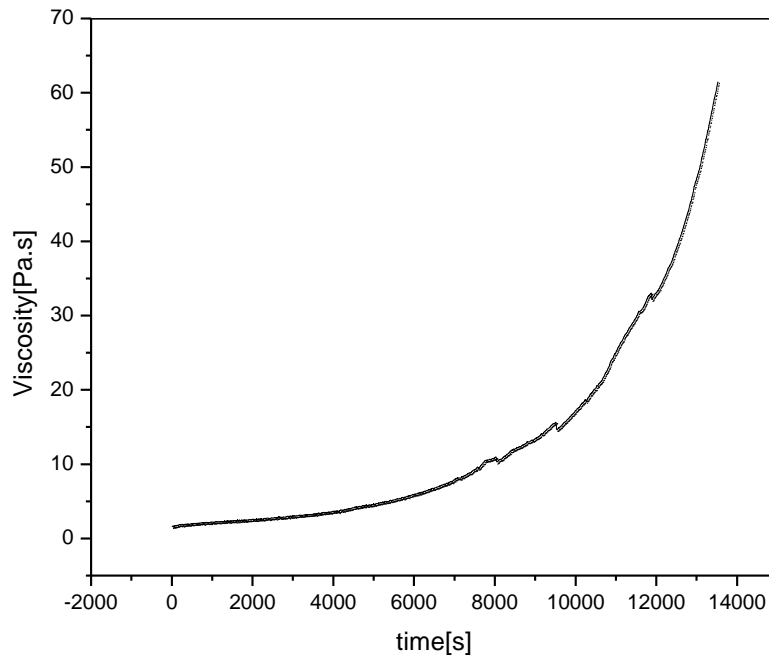
At Cure	
Work Time (min)	40
Initial Viscosity , cP	<4500
Complete Cure Time @ 25 °C (hr)	8-16
Complete Cure Time @ 70 °C (hr)	<0.5

After Cure	
Specific Gravity , g/cm ³	1.57
Durometer Hardness (Shore A)	60
Tensile at 10% elongation, MPa	0.3
Tensile Strength, MPa	2.6
Elongation, %	70
Thermal Conductivity, W/mK	0.6
Volume Resistivity, Ω.cm	5.7×10 ¹⁴
Dielectric Constant	2.9
Dissipation Factor	1.4×10 ⁻³
Dielectric Strength, KV/mm	16
Temperature Tolerance, °C	-55 to 220
CTE, ppm/°C	<250
Flammability Classification	UL94V0 (File:E340343)
Regulation pass	RoHS

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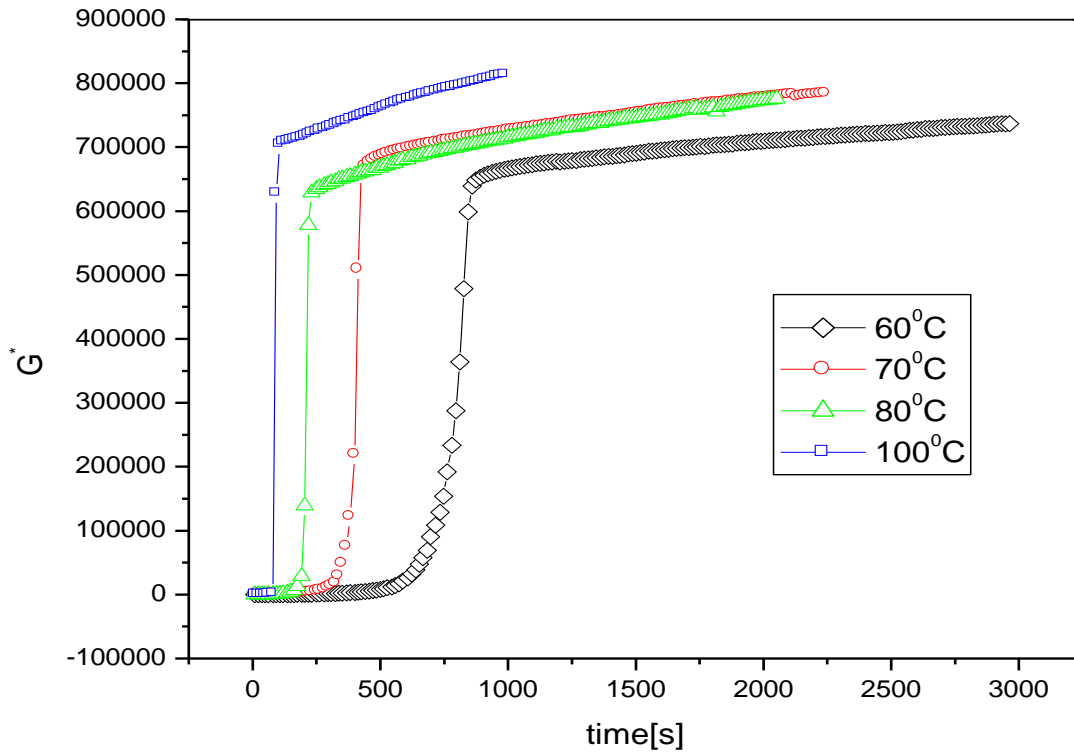
T (min)	η (Pa.s)	T (min)	η (Pa.s)
0	1.53	40	2.70
5	1.82	50	2.98
8	1.95	60	3.40
10	2.07	80	4.48
15	2.15	100	5.95
20	2.25	130	10.54
25	2.36	160	14.97
30	2.44	200	33.12
35	2.56	225	61.00

SD526A&B Viscosity vs. Time profile (25°C)



At 25°C, SD-526A&B Viscosity vs. Time (ARES Rheometer, 25mm diameter parallel plates, dynamic time sweep at 40 rad/s)

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SD-526A&B curing profiles at various temperatures (ARES Rheometer, 25mm diameter parallel plates, dynamic time sweep at 1 Hz 1 radius)

SD-526A&B Curing Summary

Temperature (°C)	Time to cure
10	2-3 days
25	8-16 hours
60	14 minutes
70	7 minutes
80	4 minutes
100	2 minutes

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HOW TO USE

- 1 Make sure that all substrates are clean and dry.
- 2 Agitate Part A and Part B to ensure each are uniform, then take each in 1:1 weight ratio.
- 3 Mix the two parts thoroughly, de-air under vacuum, then apply the encapsulant into the electronic part.
- 4 Allow the encapsulant to cure under ambient temperature or accelerate the cure at higher temperature.
- 5 Unmixed part A and part B can be stored in sealed containers for further use.

SPECIAL NOTES

- A. Mixed EMSD-526A&B has about 40 minute work time under 25°C. If left over 40 minutes before use, it may become too viscous or even cured.
- B. The complete cure time of the mixed EMSD-526A&B varies with temperature,
Under 25 °C 8-16 hours
Under 70 °C <0.5 hour
Under 10 °C 2-3 days
- C. Some chemicals may cause the catalyst poisoned resulting a longer cure time or even never cure. Typically, these chemicals are sulfur containing materials, amines, unsaturated hydrocarbons, etc.

STORAGE

Store in cool and dry place under temperature 0~30 °C.

HEALTH AND SAFETY

Refer to the MSDS for guidance on safety and health issues.

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