TECHNICAL DATA SHEET 9606 (Silicone Potting)

Two-Components

OVERVIEW

9606 Condensation Silicone Potting Compound is a kind of silicone rubber that is cured by moisture in the air and mixed catalyst. The curing time mainly depends on the amount of catalyst. The more the amount of catalyst, the faster the curing speed. However, shrinkage and by-products are released during curing. With a need to mix the liquid base adhesive and the catalyst or crosslinking agent, a two-components silicone potting compound comes in handy for insulating and encapsulating materials or airtight shock absorbers. It's a good choice if you want things to be well sealed up the some extra cushion. in electronics manufacturing and assembly, potting materials are compounds that can fill and seal cavities in electronic assemblies. By doing so, potting compounds protect components from vibration and shock.

FEATURES & BENEFITS

- Low viscosity for good flowability
- Soft, stress relieving gel provides shock dampening
- Thermally conductive for heat transfer away from electronic devices

APPLICATIONS

- 9606 A & B is designed to provide efficient thermal transfer for the cooling of electronic modules, including applications in power supply.

COMPOSITIONS

- Polydimethylsiloxane matrix
- Thermally conductive fillers
- Two part, 1 to 1 mix ratio, thermally conductive gel

MIXING AND DE-AIRING

- Upon standing, some filler may settle to the bottom of the liquid after several weeks. To ensure a uniform product mix, the material in each container should be thoroughly mixed prior to use. Two-part materials should be mixed in the proper ratio either by weight or volume. The presence of light-colored streaks or marbling indicates inadequate mixing. Automated airless dispense equipment can be used to reduce or avoid the need to de-air. If de-airing is required to reduce voids in the cured elastomer, consider a vacuum de-air schedule of > 8 inches Hg (or a residual pressure of 10-0 mm of Hg) for 10 minutes or until bubbling subsides.

TYPICAL PROPERTY DATA

Property	Unit	Result
One part or Two part		Two
Colors		Gray / White / Black
Mix Ratio		1:1
Viscosity (Part A)	cP	9500
	mPa-sec	9500
	Pa-sec	9.5
Viscosity (Part B)	cP	4200
	mPa-sec	4200
	Pa-sec	4.2
Viscosity (Mixed)	cP	6700
	mPa-sec	6700
	Pa-sec	6.7
Specific Gravity (Cured)		2.20
Working Time at 25ºC	Hours	2
Heat Cure at 120ºC	Minutes	30
Durometer	Shore OO	45
Penetration	1/10 mm	32
Elongation	%	400
Tensile Strength	psi	620
	mPa	4.3
	Kg/cm²	44
Dielectric Strength	Volt/mil	454
	kV/mm	18
Dielectric Constant	100 kHz	4.6
Dissipation Factor	100 Hz	0.002
	100 kHz	0.0002
Volume Resistivity	Ohm-cm	1.90E+14
Coefficient of Thermal Expansion (Linear CTE)	ppm/ºC	175
Thermal Conductivity	btu/hr-ft-ºF	0.555
	W/mK	0.80
UL Flammability Classification		UL 94 V-0

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PROCESSING / CURING

Cure rates are rapidly accelerated with heat (see heat-cure times in Typical Properties table). Addition-curing materials contain all the ingredients needed for cure with no by-products from the cure mechanism. Deep- section or confined cures are possible. Cure progresses evenly throughout the material. These materials generally have long working times.

POTTING LIFE AND CURE RATE

Cure reaction begins with the mixing process. Initially, cure is evidenced by a gradual increase in viscosity, followed by gelation and conversion to its final state. Pot life is defined as the time required for viscosity to double after Parts A and B (base and curing agent) are mixed.

USEFUL TEMPERATURE RANGES

For most uses, silicone gels should be operational over a temperature range of -45 to 150ºC (-49 to 302ºF) for long periods of time. However, at both the low and high temperature ends of the spectrum, behavior of the materials and performance in particular applications can become more complex and require additional considerations. For low-temperature performance, thermal cycling to conditions such as -55ºC (-67ºF) may be possible for most products, but performance should be verified for your parts or assemblies. Factors that may influence performance are configuration and stress sensitivity of components, cooling rates and hold times, and prior temperature history. At the high-temperature end, the durability of the cured silicones is time and temperature dependent. As expected, the higher the temperature, the shorter the time the material will remain useable.

REPAIRABILITY

A gel can simply be poured into the cleaned repaired area and cured.

USABLE LIFE AND STORAGE

The product should be stored in its original packaging with the cover tightly attached to avoid any contamination. Store in accordance with any special instructions listed on the product label. The product should be used by the indicated "Exp. Date" found on the label.

PACKAGING SPECIFICATIONS

25KG per bucket ‘or’ special packaging according to customer’s requirements.

OTHER INFORMATIONS

The data provided in this sheet are measured under certain conditions, in the different environment, there will be slightly different. **KOOTAI** advise user do application testing before use.

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