

OP 959-8 Two Parts High RI Silicone

Description

OP 959-8 is a clear, two parts heat curable high refractive index silicone system. It is suitable for encapsulation of high performance optoelectronic devices where high refractive index and high temperature resistance are required, for example high brightness white LED lamps. It is designed for excellent performances in temperature cycling, high temperature storage, minimal light output degradation, and outdoor weathering. It is enhanced for good resistance to yellowing from oxidation, high temperature degradation and UV radiation. It is also improved for flexibility and low encapsulation stresses.

Applications

1. Encapsulation of high power, white-light LED devices like PLCC packages.

Guidelines for Use

1. Add the part A resin into part B crosslinker by weighing **ratio 1:1**. Stir with an electric mixer until the silicone is homogeneous.
2. Remove the air bubbles in the silicone mix by vacuum degassing at 0.001 mbar (0.1 Pa) for 30 minutes.
3. Dispense the silicone and pre-cure it at 40 °C for 1 hour follow by 120 °C for 1 hour and 150 °C for 2 hours.
4. Avoid contamination with solder flux, heavy metals, amines, sulfur compounds and moisture. The silicone may not properly cure when contaminated.

Properties

Property	Test method	Unit	Typical Value		
			Part A Resin	Part B Crosslinker	Mixed
Chemical type	-	-	Polysiloxane	Polysiloxane	Polysiloxane
Appearance	Pen 10	-	Clear colorless liquid	Clear colorless liquid	Clear colorless liquid
Mix ratio, by weight	-	-	1.00 ± 0.01	1.00 ± 0.01	-
Refractive index, 25°C	Pen 28	-	1.54	1.53	1.54
Shelf life, 25°C	-	Month	12	12	-
Viscosity, 25°C	Pen 44	cP	4800	4200	4613
Pot life, 25°C	Pen 26	Hour	-	-	8
Hardness	Pen 29	Shore A	-	-	78
Light transmission at 450nm	Pen 40	%	-	-	99

5. Flush with dry nitrogen and stopper tightly for all remaining silicone resin in bottle.
6. Wear rubber gloves when handling silicone resins.

Environment, Health & Safety

This product is RoHS compliant. It does not contain any known carcinogenic, mutagenic or teratogenic components.

Recommended Cure

Cure temp.		Duration
Pre-cure	40 °C	1 hour
Post-cure	120 °C	1 hour
	150 °C	2 hours

Storage

Store both Part A resin and Part B crosslinker in cool and dry place to prolong shelf life. Keep away from sunlight and bright room light condition.

Packaging

- 500g bottle
- 1 kg bottle
- 5 kg bottle

Contact Information

Penchem Technologies Sdn Bhd
(767120-A), 1015, Jalan Perindustrian Bukit Minyak 7, 14100 Penang, Malaysia.
T: +604-501 5976, 77, 78, 79
E: enquiry@penchem.com
W: www.penchem.com

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