

OP 966 HB LED Silicone

Description

OP 966 is a clear transparent, colorless silicone system suitable for encapsulation of high brightness LED. It is recommended especially for encapsulation of high power blue LED chips where UV resistance and high temperature resistance are required. This silicone system has high hardness and yet provides low stress for excellent performances in temperature cycling, high temperature storage, high humidity storage, minimal light output degradation and outdoor weathering.

Properties

Property	Test method	Unit	Typical value		
			Part A Resin	Part B Crosslinker	Mixed
Chemical type	-	-	Polysiloxane	Polysiloxane	Polysiloxane
Appearance	Pen 10	-	Slight translucent liquid	Colorless transparent liquid	Colorless transparent liquid
Mix ratio, by weight	-	-	10.00 ± 0.01	1.00 ± 0.01	-
Shelf life at 25 °C	-	Month	12	12	-
Pot life at 25 °C	Pen 26	Hour	-	-	24
Viscosity, CAP 2000+, 10rpm, 25°C	Pen 44	cP	11,350	3,350	7,300
Refractive index at 25 °C	Pen 28	-	1.4080	1.4060	1.4090
Hardness, cured at 150°C for 60minutes	Pen 29	Shore A	-	-	65
Light transmission at 450nm	Pen 40	%	-	-	98

Applications

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

Guidelines for Use

1. Weigh Part A resin into the mix container first followed by the Part B cross-linker. Stir with an electric mixer until the silicone is homogeneously mixed and no lines of different refractive indices are observed.
2. Remove the air bubbles in the silicone mix by vacuum degas at 0.001 mbar (0.1 Pa) for 15 minutes.
3. The dispense the silicone and pre-cure the silicone at 120°C for 5 minute, then followed by post cure it at 150°C for 60 minutes.

4. Avoid contamination with heavy metals, amines, sulfur compounds and moisture. The silicone may not cure properly when contaminated.
5. Wear rubber gloves when handling silicone resins and crosslinkers.
6. Wipe off any uncured silicone spillage with tissue or dry cloth. Further cleaning may be achieved with tissue wetted with iso-propanol (IPA).
7. Flush with dry nitrogen and close tightly for all remaining silicone resin in bottle.

Recommended Cure

Cure condition	
Pre-cure	120°C/5 minutes
Post-cure	150°C/60 minutes

Storage

Store both Part A resin and Part B cross-linker in a cool, dry place to prolong shelf life.

Packaging

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

Environment, Health & Safety

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

Contact Information

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