

LED Materials

Dow Corning® OE-8001 Adhesive

FEATURES

Curing Process

- Heat cure with no byproduct formation
- Platinum catalyzed hydrosilylation addition cure (1 part system)

Cured Material

- High thermal and light resistance
- High adhesion strength over wide range of temperatures
- High modulus tolerant to good wire bonding process

COMPOSITION

- Polydimethylsiloxane adhesive

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Value
Appearance	-	Translucent liquid
Viscosity at 10 (1/s), parallel plate, Rheometer	cP	8400
	mPa-sec	8400
	Pa-sec	8.4
Thixotropy ratio (1 s-1/10 s-1)	-	2.7
Scorch time (150°C)	seconds	160
Durometer Shore D	-	61
Transparency at 450 nm, 1 mm thick	%	83
Unprimed Adhesion - Die Shear (Al)	psi	900
	MPa	6.2
	N/cm ²	620
Refractive Index @ 589 nm	-	1.42

HOW TO USE

Dow Corning LED Die Attach Adhesives are designed to be directly applied to stamping trays.

PROCESSING/CURING

These materials cure at elevated temperatures. Typical cure conditions are 150 °C for 2 hours or 170 °C for 1 hour. Materials should remain usable for 12 hours at typical room temperature (25°C). Uncured silicone can readily be removed by most hydrocarbon solvents. Polar solvents, such as ketones and alcohols, are not suitable. Dow

Corning OS Fluids are recommended to clean cured or uncured silicone residue from application equipment.

ADHESION

Dow Corning LED materials are specially designed for adhesion to commonly used LED substrates. Surface treatments such as chemical etching or plasma treatment may provide a reactive surface and improve adhesion to these types of substrates. In general, increasing the cure temperature and/or cure time will improve the ultimate adhesion.

COMPATIBILITY

Certain materials, chemicals, curing agents and plasticizers can inhibit or poison cure. Most notable of these include:

- Organotin and other organometallic compounds
- Silicone rubber containing organotin catalyst
- Sulfur, polysulfides, polysulfones or other sulfur containing materials
- Amines, urethanes or amine-containing materials
- Unsaturated hydrocarbon plasticizers
- Some solder flux residues

If a substrate or material is questionable with respect to potentially causing inhibition of cure, it is recommended that a small-scale test be run to determine suitability in a given application. The presence of liquid or uncured product at the interface between the questionable substrate and the cured gel indicates incompatibility and inhibition of cure.

PACKAGING

Dow Corning LED Die Attach Adhesives are typically supplied as five grams in a 10 ml plastic syringe.

USABLE LIFE AND STORAGE

Shelf life is indicated by the "Use Before" date found on the product label. For best results, these products require cold storage between -10 and -25°C (14 to -13°F). Check the product label for specific storage conditions.

HANDLING PRECAUTIONS PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS

DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT WWW.DOWCORNING.COM, OR FROM YOUR DOW CORNING REPRESENTATIVE, OR BY CALLING YOUR GLOBAL DOW CORNING CONNECTION.

HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area. For further information, please see our website, www.dowcorning.com or consult your local Dow Corning representative.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

LIMITED WARRANTY INFORMATION PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this

information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent. Dow Corning's sole warranty is that our products will meet the sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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