

Product Information

Semiconductor Packaging Materials

DOW CORNING

HIPEC® R 6101

Semiconductor Protective Coating

FEATURES

- Low levels of ionic impurities
- 1-part formulation
- Clear optical performance
- Addition cure chemistry
- Low modulus of elasticity

BENEFITS

- Microelectronics grade material
- Ready to use formulation -no mixing required
- Suited for optical packaging applications
- No byproducts during cure
- Absorbs stress from CTE mismatch for improved reliability performance

COMPOSITION

- 1-part
- Silicone elastomer coating

Die coating for wire bond packaging.

APPLICATION METHODS

- Manual or automated dispense

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	Result
One or Two Part	-	one
Color	-	clear
Viscosity	cP mPa-sec Pa-sec	6575 6575 6.6
Shelf Life @ -25 to -10C	months	9
Specific Gravity	-	1.04
Heat Cure Time @ 150°C	minutes	120
Durometer Shore A	-	31
Refractive Index	-	1.41
Dielectric Constant at 100 kHz	-	2.8
Dielectric Strength	volts/mil kV/mm	475 19
Volume Resistivity	ohm*cm	1.4e15
Linear CTE (by TMA)	ppm/°C	350
Impurity (Na+)	ppm	0.2
Impurity (K+)	ppm	0.4
Impurity (Cl-)	ppm	2.1

DESCRIPTION

Dow Corning® silicone encapsulants are designed to meet the key criteria for the micro- and optoelectronic packaging industry, including excellent adhesion, high purity, moisture resistance and thermal and electrical stability. With their low Young's modulus, these materials can absorb the stress caused by CTE mismatches inside the package, protecting the chip and the bonding wires.

HOW TO USE

Dow Corning encapsulants are compatible with commercially available equipment and industry standard processes. The encapsulants can be dispensed, printed or liquid injection molded. Full cure to achieve final properties can be achieved in standard forced-air convection ovens or many other oven configurations.

COMPATIBILITY

Certain materials, chemicals, curing agents and plasticizers can inhibit the cure of addition cure adhesives. Most notable of these include: Organotin and other organometallic compounds, Silicone rubber containing organotin catalyst, Sulfur, polysulfides, polysulfones or other sulfur containing materials, unsaturated hydrocarbon plasticizers, and 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 compatibility test be run to ascertain 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.

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 WEB SITE AT
DOWCORNING.COM, OR FROM
YOUR DOW CORNING
REPRESENTATIVE, OR
DISTRIBUTOR, OR BY CALLING
YOUR GLOBAL DOW CORNING
CONNECTION.**

USABLE LIFE AND STORAGE

Shelf life is indicated by the "Use By" date found on the product label. Check the product label for specific storage conditions (one part products require cold storage). One-part products produced in Japan for export are shipped using dry ice. One-part products produced in the United States are shipped using blue ice.

PACKAGING INFORMATION

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LIMITATIONS

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

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 Web site, dowcorning.com or consult your local Dow Corning representative.

**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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PARTICULAR PURPOSE OR
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CONSEQUENTIAL DAMAGES.**

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