



InvisiSil* IVS4542

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Description

IVS4542 is a two-component, addition cure silicone rubber designed for optical device coating. This product cures with heat to an elastomer.

Key Features and Benefits

- Low viscosity allows for excellent flowability
- Excellent transparency
- Convenient 1:1 mix ratio by weight
- Cures fast with heat and adheres to parts

Typical Physical Properties

UNCURED PROPERTIES		IVS4542(A)	IVS4542(B)
Appearance		Transparent	Transparent
Viscosity (23°C)	Pa•s (P)	5.7 {57}	3.2 {32}
Mixing Ratio by Weight		1:1	
Viscosity after Mixing (23°C)	Pa•s (P)	3.8 {38}	
Pot Life (23°C)	h	8	
Refractive Index (n _D ²⁵)		1.41	
CURED PROPERTIES (1h @ 150°C)(Note: When using as LED encapsulant, two-step cure process as shown below *1 is recommended)			
Density (23°C)	g/cm ³	1.03	
Hardness (Type A)		48	
Tensile Strength	MPa {kgf/cm ² }	6.6 {67}	
Elongation	%	110	
Lap Shear Strength*2	MPa {kgf/cm ² }	3.7 {38}	
Linear Expansion	1/K	2.8x10 ⁻⁴	
Volume Resistivity	Ω •cm	1.0x10 ¹⁵	
Dielectric Strength	kV/mm	20	
Dielectric Constant (60Hz)		2.8	
Dissipation Factor (60Hz)		0.001	

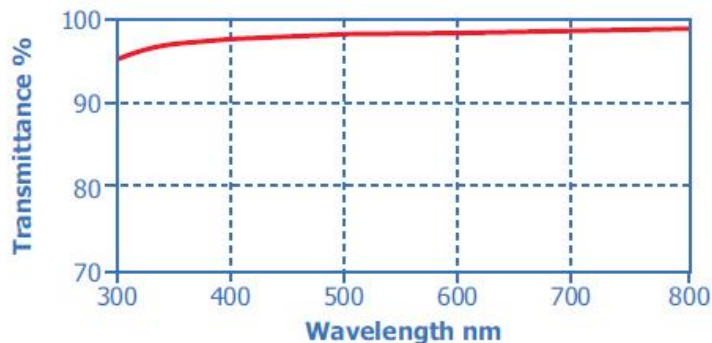
*1 Recommended cure condition: first cure; 1.5h at 80°C, second cure; 1h at 150°C*2 Substrate: PPA (Polyphthalamide)Typical property data values

should not be used as specifications.

Potential Applications

- Coating and potting of optical device

Transmittance (uncured sample, thickness: 1mm)



Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

Product Safety, Handling and Storage

- Wear eye protection and protective gloves as required while handling the product.
- Maintain adequate ventilation in the work place at all times.

- Store in a cool and dry place out of direct sunlight.
- Keep out of the reach of children.

Customers should review the latest Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, and any special storage conditions required for safety. MSDS are available at www.momentive.com or, upon request, from any Momentive Performance Materials (MPM) representative. **For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center.** Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Processing Recommendations

Weigh out (A) and (B) to the clean container 5 times larger than the volume of silicone rubber compound to be used.

Mix (A) and (B) thoroughly with clean tools.

Deaerate the mixture at a pressure of 0.65 kPa (5 mmHg) for more than 2 minutes to remove air entrapped during mixing.

Apply and cure with heat. When using as LED encapsulant, two-step cure process is recommended (first cure: 1.5h at 80°C, second cure: 1h at 150°C).

Note: All parts should be as clean and dry as possible prior to applications. Materials such as water, sulfur, nitrogen compounds, organic metallic salts,

phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. It is recommended that a preliminary test be performed to determine the compatibility.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

Packaging

- IVS4312(A): 500g plastic bottle available in cases of 10
- IVS4312(B): 500g plastic bottle available in cases of 10

Contact Information

For product prices, availability, or order placement, contact our customer service by visiting momentive.com/ContactSilicones.

For literature and technical assistance, visit our website at: www.momentive.com

DISCLAIMER

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