



IVSM4500

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Description

IVSM4500 is a two-component, high transparency and high hardness silicone material designed for optical parts molding such as LED lens. The product cures rapidly with heat.

Key Features and Benefits

- Convenient 1:1 mix ratio by weight
- Heat accelerated cure
- High transparency
- Injection molding applicable

Typical Physical Properties

UNCURED PROPERTIES		IVSM4500(A)	IVSM4500(B)
Appearance		Transparent	Transparent
Viscosity (23°C)	Pa*s	350	50
Mixing Ratio by Weight		1:1	
Viscosity after Mixing (23°C)	Pa*s	30	
Pot Life (23°C)	h	24	
Refractive Index (n_D^{25})		1.41	
Transmittance (1mm) %	400nm	99	
	800nm	>99	
CURED PROPERTIES (1h @ 150°C)			
Appearance		Transparent	
Density (23°C)	g/cm ³	1.1	
Hardness*	Type D	50	
	Type A	97	
Young Modulus	MPa	80	
Tensile Strength MPa	MPa	4.7	
Elongation	%	< 5	
Linear Shrinkage*	%	2.5	
Linear Expansion	1/K	2.2x10 ⁻⁴	

*JIS K 6249

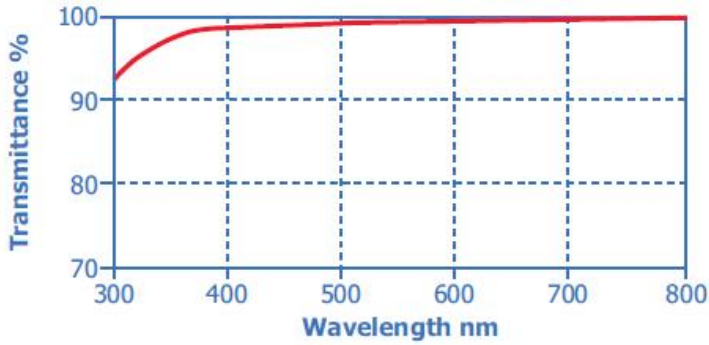
Typical property data values should not be used as specifications.

Potential Applications

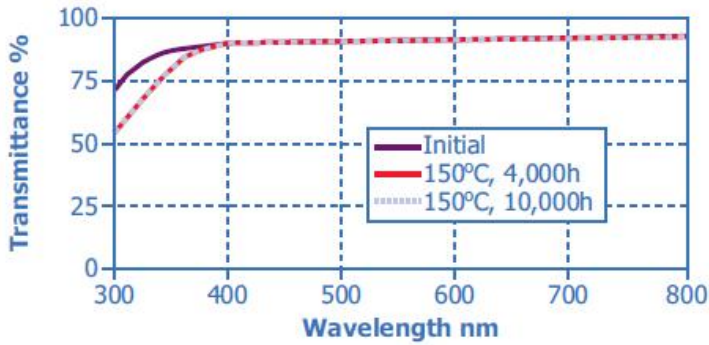
- Molding material for optical parts, optical lens, LED lens

- Potting and encapsulating for optical devices

Transmittance (uncured sample, thickness: 1mm)



Transmittance Change After Heat Aging (uncured sample, thickness: 1.4mm)



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

Injection Mold

Ready-to-use mixtures (of the components (A) and (B)) are fed directly to the injection-molding machine from the original containers by means of a metering and mixing unit. The mixture, consisting of the two components in the ratio 1:1, is injected into the heated mold.

Hand Mix and Apply

Weigh out (A) and (B) to the clean container about 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 10 minutes to remove air entrapped during mixing.

Apply and cure with heat.

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

IVSM4500(A)

- 1kg can available in cases of 10
- 18kg pail available

IVSM4500(B)

- 1kg can available in cases of 10
- 18kg pail available

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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