



# InvisiSil\* IVS4742

## Description

InvisiSil IVS4742 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
- Cures fast with heat and adheres to parts
- Convenient 1:1 mix ratio by weight
- Excellent adhesion to Polyphthalamide (PPA)

## Potential Applications

Coating and potting of optical device

LED Encapsulant and Lens

## Typical Physical Property

UNCURED PROPERTIES		InvisiSil IVS4742 (A)	InvisiSil IVS4742 (B)
Appearance		Transparent	Transparent ~ Slightly hazy*1
Viscosity (23°C)	Pa·s {P}	14 {140}	2.4 {24}
Mixing ratio by weight		1:1	
Viscosity after mixing (23°C)	Pa·s {P}	4.2 {42}	
Pot life (23°C)	h	24	
Curing time*2 (150°C)	min	2	
Refractive index (nD25)		1.41	
CURED PROPERTIES (Cure condition: 1 h @ 150°C)			
(Note: When using as LED encapsulant, two-step cure process as shown below*3 is recommended)			
Density (23°C)	g/cm3	1.05	
Hardness (Type A)		71	
Tensile strength	MPa	11 {112}	

	{kgf/cm <sup>2</sup> }	
Elongation	%	70
Lap shear strength*4	MPa {kgf/cm <sup>2</sup> }	2.7 {28}
Linear expansion	1/K	2.7×10 <sup>-4</sup>
Volume resistivity	Ω·cm	1.0×10 <sup>16</sup>
Dielectric strength	kV/mm	33
Dielectric constant (60Hz)		2.80
Dissipation factor (60Hz)		0.001

\*1 May become cloudy by moisture

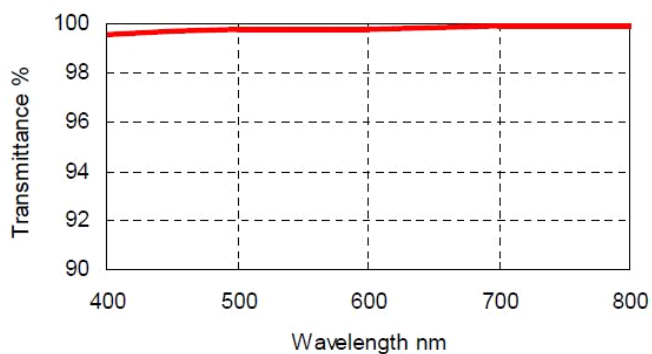
\*1 May become cloudy by moisture

\*2 T90 measured with CURELASTMETER (JSR)

\*3 Recommended cure condition: first cure; 1 h at 80°C, second cure; 1-4 h at 150°C

\*4 Substrate: PPA

### TRANSMITTANCE (uncured sample, thickness: 1 mm)



### General Instructions For Use

1. Weigh out (A) and (B) to the clean container 3-4 times larger than the volume of silicone rubber compound to be used.
2. Mix (A) and (B) thoroughly with clean tools.
3. Deaerate the mixture under vacuum to remove air entrapped during mixing.
4. Apply and cure with heat. In order to reduce expansion, two-step cure will be effective.

(Ex. first cure for 1 h at 80°C and second cure for 1-4 h 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.

### PACKAGING

- InvisiSil IVS4742(A): 500 g bottle available in cases of 9
- InvisiSil IVS4742(B): 500 g bottle available in cases of 9

## 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

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](http://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.

## Limitations

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

## Contact Information

For product prices, availability, or order placement, contact our customer service by visiting [momentive.com/ContactSilicones](http://momentive.com/ContactSilicones).

For literature and technical assistance, visit our website at: [www.momentive.com](http://www.momentive.com)

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