

INVISISIL™ SN1001 OPTICAL BONDING SILICONE GEL

Description

Invisisil SN1001 is a two-component, high elongation silicone gel used for optical bonding applications. This product will typically provide tack free time at room temperature in ~10 minutes to a soft, tacky gel with the addition of a curing agent. The soft nature and cushioning effect of this product offers excellent protection of electronic assemblies from external humidity, mechanical shock and vibration.

Key Features and Typical Benefits

- Convenient 1:1 mix ratio by weight /volume
- Middle viscosity – easily pourable
- Room temperature curability
- Soft, tacky and sticky gel
- Shock absorption and protection of delicate mechanical components from vibration
- Absence of reactive by-products that may contribute to corrosion

Potential Applications

- Optical bonding

Typical Physical Properties

		SN1001	
<u>Uncured properties</u>		A	B
Appearance		Transparent	Transparent
Viscosity (23degreeC)	Pa.s	1.0	1.0
After mixing (23degreeC)	Pa.s	1.1	
Mix ratio by weight/volume		1:1	
Refractive Index		1.4	
Specific gravity (23dereec)		0.97	
Percent transmittance (1mm thickness 400nm) %		>99	
Percent transmittance (1mm thickness 800nm) %		>99	
<u>Cured properties (0.5hr@60degreeC)</u>			
Appearance		Transparent gel	

Penetration		40
Lap shear strength (Thickness 0.15mm) MPa		0.5
Youngs modulus	MPa	0.015
Volume resistivity	$M\Omega \cdot m \{ \Omega \cdot cm \}$	$1.0 \times 10^7 \{ 1.0 \times 10^{15} \}$
Dielectric strength	kV/mm	18
Dielectric constant (60Hz)		2.7
Dielectric loss (60Hz)		0.002
Volume expansion	1/K	1×10^{-3}
Thermal conductivity	W/mK {cal/cm·s·°C}	0.17 { 4.1×10^{-4} }
Haze %		0.1
Percent transmittance (400nm) %		99
YI (D1925)		0.1
b*		0.1

Optical properties (Haze~b*) specimen:

Glass(1mm)/LOCA(180um)/Glass(1mm)

-Typical properties are average data and are not to be used as or to develop specification.

General Considerations For Use

- Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. A sample patch should always be tested prior to proceeding in order to determine compatibility.
- All parts should be as clean and dry as possible prior to application.
- Eye protection and protective gloves should be worn at all times when working with this product.
- Maintain adequate ventilation in the work place at all times.
- Keep out of the reach of children.
- Store in a cool dry place out of direct sunlight; between 2°C & 43°C.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the 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

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