

## INVISISIL™ TSJ3155 SILICONE JUNCTION COATING

### Description

INVISISIL TSJ3155 is a white, one component, heat curable silicone junction coating for semiconductors. Since the product has a thixotropic behavior it is suitable for power transistors, hybrid IC chips or covering wire bonds.

### Key Features and Benefits

- One component product - no mixing required-easy to use
- Fast cure at elevated temperature
- Semi-flowable type
- Can relax stress against the wires, pellet etc
- Excellent dielectric properties
- Product shows excellent adhesion and high purity
- Protects the surface of the semiconductor devices against ionic contaminants.

### Typical Physical Properties

Uncured Properties		TSJ3155
Appearance		White, liquid
Viscosity	Pa·s	6.0
Cured Properties (cured 4 hours at 150°C)		
Durometer	Shore A	10
Density	g/cm <sup>3</sup>	1.02
Shear Strength (Al to Al)	MPa	0.2
Dielectric Strength	kV/mm	20

Dielectric Constant (60Hz)		2.7
Dissipation Factor (60Hz)		0.001
Volume Resistivity	Ohm-cm	$1.05 \times 10^{15}$
Na+ ion content	ppm	<2
K+ ion content	ppm	<2

### Potential Applications

Junction coating for transistors, IC's, thyristors, diodes and other semiconductor devices

### 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

#### CAUTION

TSJ3155 silicone junction coating can generate flammable hydrogen gas upon contact with acidic, basic, or oxidizing materials. Such contact should be avoided.

The shelf life will be indicated by the 'use before date' on the associated documents with a minimum of 4 months when stored in the original unopened containers between 0 °C and 10 °C

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any 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**

### **Compatibility**

TSJ3155 silicone junction coating will cure in contact with most clean, dry surfaces. However, certain materials, such as butyl and chlorinated rubber, sulfur-containing materials, amines, and certain metal soap cured RTV silicone rubber compounds can cause cure inhibition. Cure inhibition is characterized by a gummy appearance of the TSJ3155 silicone junction coating at the interface between the adhesive and the substrate to be bonded. It is recommended that a sample patch test be performed with the TSJ3155 silicone junction coating to determine substrate compatibility.

### **Surface Preparation**

The adhesive performance of any polymer system is highly dependent upon proper surface preparation. In order to maximize the adhesion of TSJ3155 silicone junction coating and minimize the potential for cure inhibition, all parts should be as clean and dry as possible prior to the application of the coating.

### **Limitations**

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

### **Specifications**

Typical product data values should not be used as specifications. Assistance and specifications are available by contacting Momentive Performance Materials Technical Service RTV1 and RTV2.

### **Availability**

TSJ3155 is available in 500 g bottles in a case of 10.

### **Contact Information**

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