



# TSE325

## TSE325

### Description

TSE325 silicone adhesive is a one-component heat curable silicone adhesive designed for potting and encapsulation. This product adheres to many substrates without a primer and cures at elevated temperatures. This product has a very long working time at room temperature. TSE325 is a white, flowable material with self-leveling properties.

### Key Features and Benefits

- One component products - no mixing required
- Cure at elevated temperature
- Low viscosity - easily pourable
- Primerless adhesion to many types of substrates
- No cure by-products, low linear shrinkage
- Non-corrosive to metals and sensitive substrates
- Outstanding performance over a wide temperature range

### Typical Physical Properties

Uncured Properties		TSE325
Colour		White
Viscosity	mPa-s	4000
Specific Gravity	g/cm <sup>3</sup>	1.02
Cured Properties		(cured 1 hour at 150°C)
Durometer	Shore A	12
Elongation	%	200
Tensile Strength	MPa	0.7
Adhesion (Al to Al)	MPa	0.4
Dielectric Strength	kV/mm	21
Dielectric Constant		2.9
Dissipation Factor		0.001
Volume Resistivity	Ohm-cm	$2 \times 10^{15}$

### Potential Applications

- Coating of hybrid IC's, printed circuit boards, etc
- Electrical potting and encapsulation
- General adhesive for many types of substrates

### 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

### CAUTION

TSE325 silicone adhesive 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 month when stored in the original unopened containers between 0° and 10 °C

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.

## Processing Recommendations

### Compatibility

TSE325 silicone adhesive cures in contact with most clean, dry surfaces. However, certain materials, such as butyl and chlorinated rubber, sulfurcontaining 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 TSE325 silicone adhesive at the interface between the adhesive and the substrate to be bonded. It is recommended that a sample patch test be performed with the TSE325 silicone adhesive 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 TSE325 silicone adhesive and minimize the potential for cure inhibition, all parts should be as clean and dry as possible prior to the application of the adhesive.

### Curing

TSE325 silicone adhesive requires elevated temperatures in order to achieve full cure. Typical cure times and temperatures are as follows:

Temperature	TSE325
100°C	4 hours
120°C	2 hours
150°C	1 hour

The actual cure time is affected by such things as cross-sectional thickness of the TSE325 silicone adhesive, heat capacity of the overall assembly and efficiency and type of oven used (i.e. convection, infrared)

### Adhesion capability

Suitable substrates  
Metals: Aluminium, Copper, Ni plate; Stainless steel  
Plastics: PPS, PBT, Epoxy resin, Polyester, Phenolic resin  
Rubbers: Heat cured silicone rubber  
Inorganics: Glass, Ceramics

Not suitable substrates  
Plastics: PP, PE, Fluorocarbon resin  
Rubbers: Sulphur vulcanized rubbers, Fluorocarbon rubber

## 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

TSE325 is available in 1kg cans and 18.1 kg pails.

## 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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