



# TSE3991

## TSE3991

### Description

**TSE3991** is an ultra-low viscosity, one-component silicone which cures at room temperature to an elastomeric rubber upon exposure to humidity in the air. This product, which has a quick surface cure and is non-corrosive to metals, including sensitive metals such as copper, emits no harsh odours during cure and has good adhesion to a wide range of substrates. The cured material has superior anti-reversion properties, excellent resistance to high and low temperatures, electrical insulation properties, weatherability, water resistance and is ideally suited for general purpose adhesive sealing, potting and coating of electrical and electronic parts.

### Key Features and Benefits

- One-component, no mixing, easy-to-use
- Non-corrosive (MIL-A-46146B)
- Room temperature condensation cure
- Fast curing alcohol type
- Solventless
- Ultra-low viscosity
- Excellent adhesion to a wide range of substrates
- High and low temperature resistance (-50°C to +200°C)

### Typical Physical Properties

Typical uncured Properties	
Appearance	Black or clear, flowable
Viscosity at 23°C, Pa.s	1.5
Tack-free Time at 23°C, min	10
Corrosion MIL-A-46146B	None
Typical cured Properties (7 days @ 23°C / 50% RH)	
Appearance	Black or clear, elastomeric rubber
Density, g/cm <sup>3</sup>	1.03
Hardness, Type A	19
Tensile strength, MPa	0.7
Elongation, %	150
Adhesive strength(AL/AL)	
Adhesive strength, MPa	0.2
Cohesive Failure, %	100
Electrical Properties (cured)	
Volume resistivity, ohm.cm	2x10 <sup>15</sup>
Dielectric strength, kV/mm	18
Dielectric constant (60 Hz)	2.9
Dielectric loss (60 Hz)	0.005

## Potential Applications

- Moistureproof coating of electrical and electronic parts (Conformal coating)
- Prevents leakage during potting of high voltage parts
- Moistureproof potting of LED displays

## 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

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 below 25° 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

### Surface Preparation

TSE 3991 will bond to many clean surfaces without the aid of primers. These surfaces typically include many metals, glass, ceramic, silicone rubber and some rigid plastics.

Where adhesion is required, surfaces should be thoroughly cleaned with a suitable solvent such as naphtha or methyl ethyl ketone (MEK) to remove dirt, oil and grease. The surface should be wiped dry before applying the adhesive sealant.

When solvents are used, proper safety precautions must be observed.

### Limitations

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

### Availability

TSE 3991 C (clear) is available in 1 kg cans, 330ml cartridges and 18 kg pails.

TSE 3991 B (black) is available in 330 ml cartridges.

From automotive to healthcare, from electronics to construction, products from Momentive Performance Materials Inc. are practically everywhere you look. We are a global leader in silicones and advanced materials with a 70+ year heritage of innovation and being first to market – with performance applications that improve everyday life. By knowing our customers' needs and creating custom technology platforms for them, we provide science based solutions to help customers increase performance, solve product development issues and engineer better manufacturing processes.

**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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