

TSE3991

One Component Silicone Coating

Product 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 Performance Properties

- 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)

Applications

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

Typical Product Data

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@20°C/50%RH)	
Density, g/cm ³	1.03
Hardness, Type A	19
Tensile strength, MPa	0.7
Elongation, %	150

Adhesive Properties (AL/AL)	
Adhesive strength, MPa	0.2
Cohesive Failure, %	100
Electrical Properties (cured)	
Volume resistivity , ohm.cm	2×10^{15}
Dielectric strength, kV/mm	18
Dielectric constant (60 Hz)	2.9
Dielectric loss	0.005

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.

Instructions for Use **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.

Handling and Safety Material Safety Data Sheets are available upon request from Momentive performance materials. Similar information for solvents and other chemicals used with the Momentive performance materials products should be obtained from your supplier. When solvents are used, proper safety precautions must be observed.

Storage and Warranty Period 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.

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.



PRINCIPAL LOCATIONS – Regional Information

North America	World Headquarters 187 Danbury Road Wilton, CT 06897, USA	T 800.295.2392	F 607.754.7517
Latin America	Rodovia Eng. Constâncio Cintra, Km 78,5 Itatiba, SP – 13255-700, Brazil	T +55.11.4534.9650	F +55.11.4534.9660
Europe, Middle East, Africa and India	D-51368 Leverkusen Germany	T 00.800.4321.1000 T +31.164.293.276	F +31.164.241.750
Pacific	Akasaka Park Building - 5-2-20 Akasaka Minato-ku, Tokyo 107-6112 Japan	T +81.3.5544.3100	F +81.3.5544.3101

CUSTOMER SERVICE CENTERS

North America	Charleston, WV 25314, USA E cs-na.silicones@momentive.com		
	• Specialty Fluids	T 800.523.5862	F 304.746.1654
	• UA, Silanes, Resins, and Specialties	T 800.334.4674	F 304.746.1623
	• RTV Products-Elastomers	T 800.332.3390	F 304.746.1623
	• Sealants and Adhesives & Construction	T 877.943.7325	F 304.746.1654
Latin America	E cs-la.silicones@momentive.com		
	• Argentina & Chile	T +54.11.4862.9544	F +54.11.4862.9544
	• Brazil	T +55.11.4534.9650	F +55.11.4534.9660
	• Mexico & Central America	T +52.55.5899.5135	F +52.55.5899.5138
	• Venezuela, Ecuador, Peru, Colombia, & Caribbean	T +58.212.285.2149	F +58.212.285.2149
Europe, Middle East, Africa and India	E cs-eur.silicones@momentive.com	T 00.800.4321.1000 T +31.164.293.276	F +31.164.241750
	E cs-ap.silicones@momentive.com		
Pacific	• Japan	T +81.276.20.6182	
	• China	T +86.21.5050.4666 (ext. 1523)	
	• Korea	T +82.2.6201.4600	
	• Singapore	T +65.6220.7022	
Worldwide Hotline	Worldwide Web www.momentive.com	T 800.295.2392 T +607.786.8131	F +607.786.8309

DISCLAIMER: THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC., MOMENTIVE PERFORMANCE MATERIALS USA INC., MOMENTIVE PERFORMANCE MATERIALS ASIA PACIFIC PTE. LTD., MOMENTIVE PERFORMANCE MATERIALS WORLDWIDE INC., MOMENTIVE PERFORMANCE MATERIALS GmbH, MOMENTIVE PERFORMANCE MATERIALS SUISSE Sarl, THEIR SUBSIDIARIES AND AFFILIATES DOING BUSINESS IN LOCAL JURISDICTIONS (collectively "SUPPLIERS"), ARE SOLD BY THE RESPECTIVE LEGAL ENTITY OF THE SUPPLIER SUBJECT TO SUPPLIERS' STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIERS MAKE NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING SUPPLIERS' PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. AFOREMENTIONED EXCLUSIONS OR LIMITATION OF LIABILITY ARE NOT APPLICABLE TO THE EXTENT THAT THE END-USE CONDITIONS AND/OR INCORPORATION CONDITIONS CORRESPOND TO THE RECOMMENDED CONDITIONS OF USE AND/OR OF INCORPORATION AS DESCRIBED BY SUPPLIER IN ITS PRODUCT DATA SHEET AND/OR PRODUCT SPECIFICATIONS.

EXCEPT AS PROVIDED IN SUPPLIERS' STANDARD CONDITIONS OF SALE, SUPPLIERS AND THEIR REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN.

Each user bears full responsibility for making its own determination as to the suitability of Suppliers' materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Suppliers' products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Suppliers' Standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Suppliers. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Suppliers or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.