



TSE3663

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Description

Momentive Performance Materials TSE 3663 is a low viscosity, self-bonding, two part condensation cure RTV which exhibits good deep section cure.

Key Features and Benefits

- Self bonding, good primerless adhesion to many substrates such as metals, glass and many types of plastics
- Good deep section cure
- Non corrosive to metal substrates
- Excellent dielectrical properties

Typical Physical Properties

Typical Uncured Properties:

		TSE 3663 A	TSE 3663 B
Colour		greyish white	pale yellow
Density	g/cm ³	1,19	1,01
Viscosity	mPa·s	5000	6
Pot life	hours	0,5 (mix ratio A:B = 100:2)	

Mechanical

		TSE 3663
Cured properties after 3d RT		(mix ratio A:B = 100:2 by weight)
Density	g/cm ³	1,19
Hardness	Shore A	45
Tensile Strength	MPa	1,4
Elongation	%	130
Thermal conductivity	W/m·K	0,27

Electrical

Volume resistivity	Ω·cm	1,2 · 10 ¹⁵
Dielectric constant @ 60 Hz		3,1
Dielectric loss @ 60 Hz		0,025
Dielectric strength (obtained on 2mm sheet)	kV/mm	19

Adhesion properties (cure conditions 4d @ 25°C)

Mix ratio of A:B = 100:2 by weight

Substrates	

Aluminium	Good
Mild Steel	Good
Stainless Steel	Fair
Copper	Good
Nickel Plated Steel	Good
Phenolic	Fair
Epoxy	Fair
Polyester	Good
PBT	Poor
Polycarbonate	Good
PPS	Poor
Acrylic	Poor
PPO	Poor
PVC	Good

These data are given as an indication. For final application adhesion to specific type of substrate used in the final application must be confirmed by testing.

Potential Applications

- Waterproof sealing. Bonding and potting for electrical parts and electronics devices
- Coating of Printed circuit Boards (PCB's)

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 from the material will be indicated by the "use before date" on the associated documents with a minimum of 4 months when stored in the unopened containers at 25° C or less.

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 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

Mixing

Since settling of filler occurs during storage, TSE3663A base compound should be thoroughly stirred in the original container before mixing together with TSE3663B catalyst.

After mixing the TSE3663A select a mixing container 4-5 times larger than the volume of RTV silicone rubber compound to be used. Weigh out the quantities of TSE3663A and TSE3663B needed.

With clean tools, thoroughly mix the A and B components together, scraping the sides and bottom of the container carefully to produce a homogeneous mixture. When using power mixers, avoid excessive speeds, which could entrap large amounts of air or cause overheating of the mixture, resulting in shorter pot life.

Deaeration

Air entrapped air during mixing should be removed to eliminate voids in the cured product. Expose the mixed material to a vacuum of about 30 mbar. The material will expand, crest, and recede to about the original level as the bubbles break. Degassing is usually complete about two minutes after frothing ceases. When using the RTV silicone rubber compound for potting, a deaeration step may be necessary after pouring to avoid capturing air in complex assemblies.

Bonding

Primers are not typically required when using TSE3663. This silicone series offers excellent primerless adhesion to many substrates including most sensitive metals, glass and many types of plastics. Primers are available for difficult to bond to substrates. SS4179 primer is recommended for most plastics and painted surfaces, and SS4004P and SS4044P are recommended for most metal substrates. Adhesion to all substrates should be periodically verified by the user during actual production. Momentive Performance Materials will conduct adhesion tests on submitted substrates upon request.

Where adhesion is required, surfaces should be thoroughly cleaned with a suitable solvent such as naphtha, methyl ethyl ketone (MEK), or isopropyl alcohol (IPA) to remove dirt, oil and grease. The surface should be wiped dry before the solvent evaporates to effectively remove the contaminants. Porous surfaces should be allowed to completely dry before application of TSE3663.

Limitations

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

Availability

TSE 3663A component is available in 1kg cans and 18kg pails.

TSE 3663B component is available in 30g and 300g bottles.

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.

For literature and technical assistance, visit our website at: www.momentive.com

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