

TSE 3664M

Two component Condensation Cure RTV Flame Retardant, Self-Bonding

Product Description TSE 3664M is a two-part condensation cure silicone rubber for electrical potting. TSE3664M cures at room temperature to form elastic flame retardant rubber and adheres to various types of materials such as plastics, glass and ceramics without the use of primers.

Key Performance Properties

- Flame retardant: UL94 V-0 recognized (file No. E56745)
- Low viscosity allows for excellent flowability
- Room temperature cure
- Fast cure and excellent deep section cure
- Excellent adhesive properties: primerless adhesion to many types of substrate
- Non corrosive to metal substrates
- No cure inhibition
- Excellent dielectric properties

Application

- Bonding and potting of electric and communication parts
- Moisture proof coating of Printed circuit Boards (PCB's)
- Moisture proof sealing of meters

Typical Product Data

Typical Uncured Properties:

		TSE 3664M(A)	TSE 3664M (B)
Appearance		Gray	Blue
Density	g/cm ³	1,41	1,08
Viscosity	mPa·s	3800	15
Mix ratio by weight		100:7.5	
Mix ratio by volume		100:10	
Viscosity after mixing	mPa.s	3000	
Pot life	Hr	0,1	

Mechanical

		TSE 3664M
Cured properties after 3 days at 23C, 50 % RH.		(mix ratio A:B = 100:7.5 by weight)
Appearance		Gray, elastic rubber
Density	g/cm ³	1,41
Hardness	Shore A	62
Tensile Strength	MPa	3.2



Elongation	%	70
Shear Adhesion *1	MPa	1.0
Thermal conductivity *2	W/m·K	0,42

Electrical

Volume resistivity	$\Omega \cdot \text{cm}$	$5.0 \cdot 10^{15}$
Dielectric constant @ 60 Hz		3,1
Dissipation factor @ 60 Hz		0,01
Dielectric strength (obtained on 2mm sheet)	kV/mm	26

*1 Glass Lap Shear

*2 In- house test method

Typical Product Data

Adhesion properties

Mix ratio of A:B = 100:7.5 by weight

Substrates	
Aluminium	Good
Stainless Steel	Good
Phenolic resin	Good
Epoxy resin	Good
Polyester	Good
PP	Poor
Glass	Good
PE	Poor
Fluorocarbon resin	Poor
Fluorocarbon rubber	Poor

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

Specifications

Typical product data values should not be used as specifications. Assistance and specifications are available by contacting Momentive performance materials Technical Service RTV 1 & RTV 2.

Instructions for Use **Mixing**

Since settling of filler can occur during storage, TSE3664M(A) base compound should be stirred homogeneously in the original container before mixing together with TSE3664M(B) catalyst.

After mixing the TSE3664M(A) select a mixing container 4-5 times larger than the volume of RTV silicone rubber compound to be used. Weigh out the quantities of TSE3664M(A) and TSE3664m(B) 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 during mixing should be removed to eliminate voids in the cured product. Expose the mixed material to a vacuum of about 20 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.

Instructions for Use

Bonding

Primers are not typically required when using TSE3664M. 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. The user should periodically verify adhesion to all substrates 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..

Handling and Safety

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

**Storage and
Warranty Period**

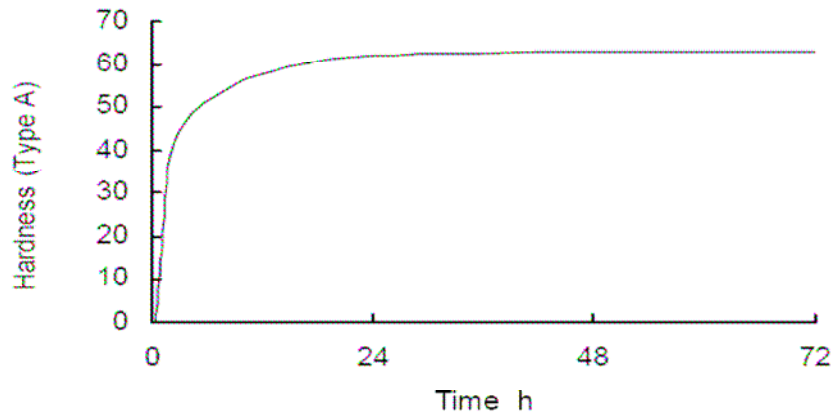
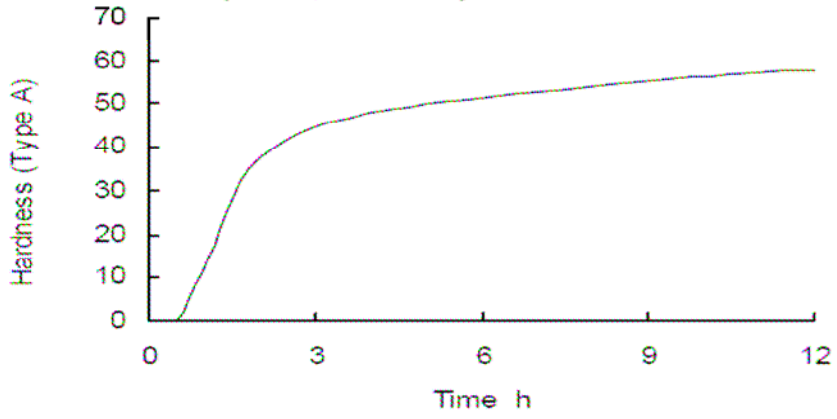
The shelf life from the material will be indicated by the "use before date" on the associated documents with a minimum of 3 months when stored in the unopened containers up till 43° C.

Availability

TSE 3664M(A) is available in 1kg cans and 20kg pails.
TSE 3664M(B) component is available in 240 and 500 g bottles each in a case of 10.



CURE PROPERTY (23°C, 50%RH)





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 +31.164.225350	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		
	<ul style="list-style-type: none"> Specialty Fluids UA, Silanes, Resins, and Specialties RTV Products-Elastomers Sealants and Adhesives & Construction 	T 800.523.5862 T 800.334.4674 T 800.332.3390 T 877.943.7325	F 304.746.1654 F 304.746.1623 F 304.746.1623 F 304.746.1654
Latin America	E cs-la.silicones@momentive.com		
	<ul style="list-style-type: none"> Argentina & Chile Brazil Mexico & Central America Venezuela, Ecuador, Peru, Colombia, & Caribbean 	T +54.11.4862.9544 T +55.11.4534.9650 T +52.55.5899.5135 T +58.212.285.2149	F +54.11.4862.9544 F +55.11.4534.9660 F +52.55.5899.5138 F +58.212.285.2149
Europe, Middle East, Africa and India	E cs-eur.silicones@momentive.com	T 00.800.4321.1000 T +31.164.225350	F +31.164.241750
Pacific	E cs-ap.silicones@momentive.com		
	<ul style="list-style-type: none"> Japan China Korea Singapore 	T +81.276.20.6182 T +86.21.5050.4666 (ext. 1523) T +82.2.6201.4600 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, 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.

Momentive and M-design logo are trademarks of Momentive Performance Materials Inc.
Copyright 2008 Momentive Performance Materials, Inc. All rights reserved.