

# Silicone RTVs For Thermal Protection Systems

**A broad range of advanced silicone RTVs that can perform in the most extreme conditions**

Since the beginning of time, people have looked up at the stars and longed to explore the world above them. For more than 60 years, Momentive has been part of the journey into space—providing the silicone in the boots of the first astronaut to walk on the moon—in the rockets that propelled those pioneers into orbit—and on every US manned space flight since. Building on the legacy of our past, Momentive continues to develop innovative silicones that help today's aerospace pioneers reach ever greater heights. From launch to landing, Momentive's advanced silicone products enable the next generation of space exploration.

## Key Features and Typical Benefits of Thermal Protection Silicones

- Maintains critical properties for extended time over a wide range of extreme temperatures encountered by spacecraft from  $m-130^{\circ}\text{C}$  ( $-200^{\circ}\text{F}$ ) to  $260^{\circ}\text{C}$  ( $500^{\circ}\text{F}$ )
- Remains flexible in the extreme low temperatures of space
- Excellent thermal insulation
- Low outgassing solutions to protect crew compartments and sensitive optical equipment from material contamination in extreme temperatures
- Very strong adhesion with primer to support structural integrity
- Electrically static dissipative solutions
- Room temperature cure
- Available in paste to flowable viscosities to accommodate a wide range of applications

## POTENTIAL APPLICATIONS

Cast in place heat shielding

Adhesion of thermal blankets

Protective coatings and thermal insulation for sensitive components and critical equipment

Encapsulants & potting for high heat locations

Interior & exterior adhesives

Flexible composite coatings



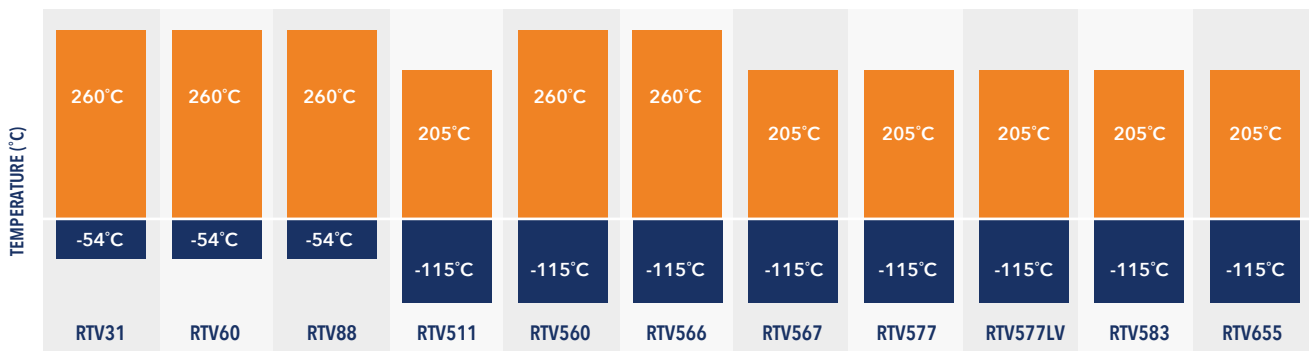
## THERMAL PROTECTION MATERIALS TYPICAL PRODUCT PROPERTIES

Product	Cure Types	Description	Work Life Time (hr)	Tensile (psi)	Tear Strength (Die B, lb/in)	Elongation (%)	Hardness (Shore A)	Catalyst Options
RTV31	2P, Condensation	Red high temperature flowable sealant	2	870	29	54	170	YES
RTV60	2P, Condensation	Red high temperature flowable sealant	2	990	40	57	120	YES
RTV88	2P, Condensation	Red high temperature paste sealant	.8	830	42	58	120	YES
RTV511	2P, Condensation	White low temperature flowable capable sealant	1.5	380	21	42	170	YES
RTV560	2P, Condensation	Red low & high temperature capable sealant	2-3	690	31	55	120	YES
RTV566	2P, Condensation	Low outgassing, red low & high temperature capable sealant	1.5	800	-	56	120	NO
RTV567	2P, Condensation	Low outgassing, translucent and white low temperature paste capable sealant	2	440	38	48	150	YES
RTV577	2P, Condensation	White low temperature paste capable sealant	4	250	-	47	140	NO
RTV577LV	2P, Condensation	Low outgassing, white low temperature paste capable sealant	4	350	-	47	140	NO
RTV583	2P, Condensation	Black, electric static dissipative, low temperature paste sealant volume resistivity < 6 x 10 <sup>9</sup> ohm cm	1	360	-	48	120	NO
RTV655	2P, Addition	Clear, low temperature flowable sealant, unlimited cure depth with the ability to cure at RT	4 @ 23°C 0.25 @ 150°C	920	-	44	44	NO

Typical data are average data and are not to be used as or to develop specifications.

## EXTREME HIGH AND LOW TEMPERATURE PRODUCT LINE

■ Low Temperature ■ High Temperature



## Customer Service Centers

Email [commercial.services@momentive.com](mailto:commercial.services@momentive.com)

**MOMENTIVE™**

### Americas

+1 800 295 2392  
+1 614 986 2495

### Europe, Middle East, Africa and India

+00 800 4321 1000  
+40 212 044229

### China

+800 820 0202  
+86 21 3860 4892

### Japan

+81 276 20 6182  
+81 276 20 6182

**All Other Countries**  
+60 3 9206 1543

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY "SUPPLIER"), ARE SOLD SUBJECT TO SUPPLIER'S 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, SUPPLIER MAKES 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 ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SUPPLIER'S STANDARD CONDITIONS OF SALE, SUPPLIER AND ITS 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 Supplier's 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 Supplier's 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 Supplier's standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. 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 Supplier 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 the Momentive logo are trademarks of Momentive Performance Materials.  
Copyright 2018 Momentive Performance Materials Inc. All rights reserved.