

## Tufel™ II 94605

### Description

Tufel II Silicone Rubber Compounds 94405, 94505, 94605, and 94705 are 40-70 durometer low volatile fast-cure addition cured silicone elastomers for molding. They may be used by themselves or blended to intermediate durometers. Applications include fabricated molding that require short cycle time, deep section cures, and parts with low extractable requirements.

### Key Features and Typical Benefits

- LV Bases Minimize Post Cure Times
- Totally Peroxide-Free Cure System
- Significant Reduction in Molding cycle Times
- Lower Molding Temperature Range (150-166°C) (300-330°F)
- Superior Mixed Shelf Life
- High Tear Strength
- Tight Surface Cure
- Non-blooming
- Translucency

### Typical Physical Properties

TYPICAL CHARACTERISTICS OF UNCURED TUFEL II SILICONE RUBBER - 94005 SERIES

| PROPERTIES | 94405 | 94505 | 94605 | 94705 |
|------------|-------|-------|-------|-------|
|------------|-------|-------|-------|-------|

|   |             |             |             |             |
|---|-------------|-------------|-------------|-------------|
| Specific Gravity                        | 1.11        | 1.15        | 1.19        | 1.23        |
| Appearance                              | Translucent | Translucent | Translucent | Translucent |
| Polymer Classification<br>(ASTM D-1418) | VMQ         | VMQ         | VMQ         | VMQ         |

TYPICAL RHEOLOGICAL PROFILE - MONSANTO ODR WITH 3° ARC @ 150°C  
(300°F)

|                   |         |         |         |         |
|-------------------|---------|---------|---------|---------|
| Minimum Viscosity | 1-6     | 2-5     | 2-7     | 2-7     |
| T1, Minutes       | 0.5-1.0 | 0.5-1.0 | 0.5-1.0 | 0.5-1.0 |
| T1, Minutes       | 33-48   | 32--52  | 32--52  | 60-90   |

TYPICAL PHYSICAL PROPERTIES OF TUFEL II SILICONE RUBBER - 94005  
SERIES

|             |   |       |       |       |      |
|-------------|---|-------|-------|-------|------|
| ASTM METHOD | PRESS CURE - 10 MINUTES @ 177°C (350°F)       | 94405 | 94505 | 94605 | 4705 |
| D-2240      | Hardness, Durometer A                         | 40    | 47    | 57    | 72   |
| D-412       | Tensile Strength, psi                         | 1320  | 1325  | 1250  | 1340 |
|             | MPa   | 9.1   | 9.1   | 8.6   | 9.2  |
| D-412       | Elongation, %                                 | 890   | 930   | 750   | 600  |
| D-624       | Tear Resistance, Die B, ppi                   | 230   | 250   | 240   | 325  |
|             | KN/M  | 40.4  | 43.9  | 42.1  | 57.0 |
| D-412       | Tensile Modulus @ 100% psi                    | 140   | 175   | 250   | 500  |
|             | MPa   | 1.0   | 1.2   | 1.7   | 3.4  |
|             | POST CURE 2 HOURS @ 177C (350F)               |       |       |       |      |
| D-2240      | Hardness, Durometer A                         | 43    | 52    | 62    | 74   |
| D-41        | Tensile Strength, psi                         | 1390  | 1400  | 1250  | 1340 |
|             | MPa   | 9.6   | 9.7   | 8.6   | 9.2  |
| D-412       | Elongation, %                                 | 780   | 880   | 690   | 580  |
| D-624       | Tear Resistance, Die B, ppi                   | 230   | 270   | 260   | 325  |
|             | KN/M  | 40.4  | 47.4  | 45.6  | 57.0 |
| D-624       | Tensile Modulus @ 100% psi                    | 175   | 225   | 320   | 530  |
|             | MPa   | 1.2   | 1.6   | 2.2   | 3.7  |
| D-395       | Compression Set, %<br>22 hrs. @ 150°C (300°F) | 20    | 20    | 23    | 18   |

## Regulatory Compliance

- A representative sample of an analogous product to Tufel II 94605 met the requirements of USP Class VI and ISO 10993 under Good Laboratory Practices (GLP).
- Listed as UL 94 HB (File No. E205753)
- The ingredients are listed in the BfR recommendation XV “Silicones” <sup>(1)</sup>
- Compositionally compliant with 21 CFR 177.2600 – Rubber articles intended for repeated use<sup>(2)</sup>

- (1) Producer of the final article needs to test and confirm that the final product meets the extraction limits of BfR XV or corresponding EU legislation.
- (2) It is the responsibility of the user to determine that the final product complies with the extractive limitations and other requirements of 21 CFR 177.2600, under their specific manufacturing procedures

### **Patent Status**

여기에 포함된 어떠한 내용도 관련 특허가 없음을 의미하거나 특허 소유자의 허가 없이 특허에서 다루는 발명을 실행하기 위한 허가, 유도 또는 권고를 구성하는 것으로 해석되어서는 안 됩니다.

### **Product Safety, Handling and Storage**

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any 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.

### **Limitations**

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

### **Contact Information**

Email

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

**Telephone**

|                         |                      |   |                     |
|-------------------------|----------------------|---|---------------------|
| <b>Americas</b>         | <b>Latin America</b> | <b>EMEAI- Europe, Middle East, Africa &amp; India</b> | <b>ASIA PACIFIC</b> |
| +1 800 295 2392         | <b>Brazil</b>        | <b>Europe</b>   | <b>China</b>        |
| Toll free*              | +55 11 4534 9650     | +390510924300   | 800 820 0202        |
| +704 805 6946           | Direct Number        | Direct number   | Toll free           |
| Direct Number           |                      |   | +86 21 3860 4892    |
|                         |                      |   | Direct number       |
| *All American countries | <b>Mexico</b>        | <b>India, Middle East &amp; Africa</b>                | <b>Japan</b>        |
|                         | +52 55 2169 7670     | + 91 44 71212207                                      | +81 3 5544 3111     |
|                         | Direct Number        | Direct number*  | Direct number       |
|                         |                      | <b>*All Middle Eastern countries, Africa, India,</b>  | <b>Korea</b>        |
|                         |                      |   | +82 2 6201 4600     |

For literature and technical assistance, visit our website at: [www.momentive.com](http://www.momentive.com)

**DISCLAIMER:**

**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.

\*Tufel™는 Momentive Performance Materials Inc.의 상표입니다.

The use of the "™" symbol designates registered or unregistered trademarks of Momentive Performance Materials Inc. or its affiliated companies. Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.