

Tufel™ II 94405

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 (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 | 94705 |
|--------------------|--|--------------|--------------|--------------|--------------|
| 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 @ 177°C (350°F) | | | | |
| D-2240 | Hardness, Durometer A | 43 | 52 | 62 | 74 |
| D-412 | 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, % 22 hrs. @ 150°C (300°F) | 20 | 20 | 23 | 18 |

Regulatory Compliance

- A representative sample of an analogous product to Tufel II 94405 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” ⁽¹⁾
- Compositionally compliant with 21 CFR 177.2600 – Rubber articles intended for repeated use⁽²⁾

(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

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the 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

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 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.

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