

Tufel™ III 92506

Description

Tufel III rubber series are biocompatible(1), two component silicone rubber compounds. 92506 and 92656 are 50 and 65 durometer addition curable silicone elastomers that offer low compression set and high resilience with no post bake required for most applications. The combination of these properties may lead to longer service life in highly mechanical applications. The 92506 and 92656 elastomers can be used to produce extruded and calendered parts with excellent permanent set resistance and should be considered for applications such as peristaltic pump tubing, gaskets and seals.

Key Features and Benefits

- Low compression set
- Excellent elastic memory
- Biocompatible(1)
- No post baking required for most applications
- Low volatile bases minimize porosity
- Peroxide-free cure system
- Broad processing window
- High output rates
- Tight surface cure
- Non-blooming
- Translucency
- Low hysteresis

Typical Physical Properties

Typical Characteristics of Uncured Tufel III Silicone Rubber – 92006 Series

| Properties | 92506 | 92656 |
|--|-------------|-------------|
| Specific Gravity | 1.12 | 1.16 |
| Appearance | Translucent | Translucent |
| Polymer Classification (ASTM D-1418) | VMQ | VMQ |
| Williams Plasticity Range (ASTM D-926) | 200-300 | 210-310 |

Typical Physical Properties of Tufel III Silicone Rubber – 92006 Series Catalyzed with 1.0 pphr of CA-6 per 99 pphr of base compound

| ASTM Method | Press Cure - 10 minutes @ 177°C (350°F) | 92506 | 92656 |
|-------------|---|-------|-------|
| D-2240 | Hardness, Durometer A | 50 | 65 |
| D-412 | Tensile Strength, psi | 1100 | 1300 |
| | MPa | 7.6 | 8.9 |
| D-412 | Elongation, % | 450 | 350 |
| D-624 | Tear Resistance, Die B, ppi | 100 | 120 |
| | KN/m | 17.5 | 21.0 |
| D-412 | 100% Modulus, psi | 200 | 375 |
| | MPa | 1.4 | 2.6 |
| D-395 | Compression Set, % 22 hrs. @ 177°C (350°F) | 30 | 31 |
| D-2632 | Bayshore Resilience | 60 | 61 |
| ASTM Method | Post Cure - 2 hrs @ 177°C (350°F) | 92506 | 92656 |
| D-395 | Compression Set, % 22 hrs. @ 177°C (350°F) | 15 | 14 |

Potential Applications

Healthcare

- Fluid and drug delivery tubing
- Volumetric infusion pumps
- Enteral pumps
- Ambulatory pumps
- Hose/tubing used in pharmaceutical production
- Gaskets, seals and valves

Consumer Goods

- Tubing used for dispensing of food and beverages
- Gaskets, seals and valves

General Industrial

- Tubing used in chemical/industrial processing plants
- Tubing used in laboratory peristaltic pumps
- Gaskets, seals and valves

Regulatory Compliance

- A representative sample of an analogous product to Tufel II 92506 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

Standard copy to come

Product Safety, Handling and Storage

Standard copy to come

Limitations

Standard copy to come

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