

# Material Property Data Sheet

## S500-70



### S500-70 Silicone (VMQ)

S500-70 offers outstanding temperature resistance across a broad range, from -80°F to +440°F. This inert, FDA grade silicone is ideal for use in food handling and medical applications. S500-70 also provides excellent resistance to sunlight, ozone, oxygen, UV light and moisture meeting many industry standards including MIL-SPEC.

| ASTM D2000 Designation | Physical Properties                                 | Requirements | Typical Results |
|------------------------|---|--------------|-----------------|
| GE                     | Original Properties                                 |              |                 |
|                        | Durometer, Shore A                                  | 70 +/- 5     | 70              |
|                        | Tensile, MPa (psi), Minimum                         | 6 (870)      | 6.2 (995)       |
|                        | Elongation, % Minimum                               | 150          | 284             |
|                        | Specific Gravity                                    | -            | 1.39            |
|                        | Color   | -            | Red             |
| A19                    | Heat Resistance, D573, 70 hrs @ 225°C               |              |                 |
|                        | Durometer Change, Points                            | +10          | +4              |
|                        | Tensile Strength Change, % Maximum                  | -25          | -7              |
|                        | Elongation Change, % Maximum                        | -30          | -14             |
|                        | Bend flat, no cracking or checking                  | Pass         | Pass            |
| B37                    | Compression Set, Method B, 22 hrs @ 175°C           |              |                 |
|                        | Deflection, % Maximum                               | 25           | 12              |
| EA14                   | Water Resistance, D471, 70 hrs @ 100°C              |              |                 |
|                        | Durometer Change, Points                            | +/- 5        | -3              |
|                        | Volume Change, %                                    | +/- 5        | +4              |
| EO16                   | Fluid Resistance, D471, IRM 901 Oil, 70 hrs @ 150°C |              |                 |
|                        | Durometer Change, Points                            | 0 to -15     | -5              |
|                        | Tensile Change, % Maximum                           | -20          | -6              |
|                        | Elongation Change, % Maximum                        | -20          | -4              |
|                        | Volume Change, %                                    | +10 / -0     | +6              |
|                        | Decomposition                                       | None         | None            |
|                        | Surface Tackiness                                   | None         | None            |

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| ASTM D2000 Designation | Physical Properties   | Requirements | Typical Results |
|------------------------|---|--------------|-----------------|
| EO36                   | Fluid Resistance, D471, IRM 903 Oil, 70 hrs @ 150°C<br>Durometer Change, Points<br>Volume Change, %                       | -30<br>+60   | -14<br>+37      |
| F19                    | Low-Temp Resistance, D2137, Method C, 9.3.3<br>Nonbrittle after 3 min at -55°C<br>Nonbrittle after 3 min at -65°C (-85°F) | Pass<br>-    | Pass<br>Pass    |
| G11                    | Tear Resistance, D624, Die B<br>Tensile < 7.0 MPa, Minimum kN/m   | 9            | 19              |

**Specifications Met**

ASTM D2000 M5GE 706 A19 B37 EA14 EO16 EO36 F19 G11  
 REACH SVHC 235  
 RoHS 2015/863  
 California Proposition 65  
 Dodd-Frank Consumer Protection Act: No conflict materials (Tantalum, Tin, Tungsten & Gold)  
 A-A-59588B Class 2A & 2B, Grade 70 (Formally ZZ-R-765)  
 FDA 21 CFR 177.2600  
 AMS 3304 Rev J  
 EPA Toxic Substances Control Act (TSCA) Section 6(h)  
 Animal Derived Material Free (TSE/BSE) & Latex Free (DNR)

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