

BISCO® Silicones

BISCO® Silicones – General Purpose Solid Silicones Typical Values

| | Test Method | HT-1240 | HT-1250 | HT-1260 | HT-1270 | HT-1500 | |
|--|--|----------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Typical Physical Properties | Durometer, Shore "A" (pts) | ASTM D-2240 | 40 ± 5 | 50 ± 5 | 60 ± 5 | 70 ± 5 | 75 ± 10 |
| | Tensile Strength, psi (MPa) | ASTM D-412 | 825 (5.7) | 950 (6.6) | 1050 (7.2) | 1150 (7.9) | 300 (5.3) A |
| | Elongation, % | ASTM D-412 | 350 | 300 | 250 | 200 | N/A |
| | Tear Strength, ppi (kN/m) | ASTM D-624 | 50 (8.8) | 70 (12.2) | 75 (13.1) | 90 (15.8) | N/A |
| | Compression Set, % 70 hr @ 302°F (150°C) | ASTM D-395 (B) | 20 | 20 | 20 | 25 | 25 |
| Effects of Dry Heat Aging 70 hr @ 437°F (225°C) | Change in Hardness, Shore "A" (pts) | ASTM D-573 | ±5 | ±5 | ±5 | ±5 | -5 to +10 |
| | Change in Tensile Strength, % | ASTM D-573 | -15 | -15 | -15 | -15 | -20 A |
| | Change in Elongation, % | ASTM D-573 | -35 | -35 | -35 | -35 | N/A |
| Effects of Oil Immersion ASTM #1 Oil 70 hr @ 302°F (150°C) | Change in Hardness, Shore "A" (pts) | ASTM D-471 | -10 to +5 | -10 to +5 | -10 to +5 | -10 to +5 | -10 to +5 |
| | Change in Tensile Strength, % | ASTM D-471 | -10 | -10 | -10 | -10 | -20 A |
| | Change in Elongation, % | ASTM D-471 | -15 | -15 | -15 | -15 | N/A |
| | Change in Volume, % | ASTM D-471 | +5 | +5 | +5 | +5 | +10 |
| Electrical & Thermal Properties | Dielectric Constant | ASTM D-150 | 3.0 | 3.0 | 3.1 | 3.2 | 3.2 |
| | Dielectric Strength, Volts/mil | ASTM D-149 | 400 | 400 | 400 | 400 | 400 |
| | Volume Resistivity, Ohm – cm | ASTM D-257 | 10 ¹⁴ | 10 ¹⁴ | 10 ¹⁴ | 10 ¹⁴ | 10 ¹⁴ |
| | Thermal Conductivity, BTU in/hr/ft ² /°F (W/m ·K) | ASTM D-518 | 1.7 (0.25) | 1.8 (0.26) | 1.9 (0.27) | 2.1 (0.30) | 2.0 (0.29) |
| Environmental Resistance | Volume Change from Water Immersion %, 70 hr. @ 212°F (100°C) | ASTM D-471 | +10 | +5 | +5 | +5 | +5 |
| | Low Temperature Embrittlement, °F (°C) | ASTM D-2137 | -80 (-62) | -80 (-62) | -80 (-62) | -80 (-62) | -80 (-62) |
| | Recommended Use Temperature, °F (°C) | | -80 to 425 (-62 to 218) | -80 to 425 (-62 to 218) | -80 to 425 (-62 to 218) | -80 to 425 (-62 to 218) | -80 to 425 (-62 to 218) |
| Dimensions | Available Thickness Range, inches (mm) | | 0.020 to 0.125 (0.5 to 3.2) | 0.020 to 0.125 (0.5 to 3.2) | 0.020 to 0.125 (0.5 to 3.2) | 0.020 to 0.125 (0.5 to 3.2) | 0.031 to 0.125 (0.8 to 3.2) |
| | Standard Widths, inches (mm) | | 36 (914) | 36 (914) | 36 (914) | 36 (914) | 36 (914) |
| | Standard Colors | | Red B | Red B | Red B | Red B | Red |
| Specifications Available | A-A-59588 | | 40 | 50 | 60 | 70 | N/A |
| | AMS Specification | | N/A | 3302 | 3303 | 3304 | 3320 C |

Notes: All metric conversions are approximate. Typical values are a representation of an average value for the population. For specification values contact Rogers Corporation. Additional technical information may be available. All BISCO test procedures are available for view. Please contact your Rogers Sales Engineer.

- A** Data relevant to the breaking strength of the fiberglass only, and measured in ppi (MPa-cm) using ASTM D-751 cut strip method
- B** White, black and gray formulations available
- C** AMS 3220 available thicknesses are 0.063" (1.59mm), 0.094" (2.38mm) and 0.125" (3.2mm)

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| Nominal Thickness inch (mm) | Tolerance |
|--------------------------------|--------------------|
| 0.020" (0.51mm) | ±0.004" (±0.10mm) |
| 0.031" (0.79mm) | ±0.005" (±0.13mm) |
| 0.039" (1.0mm) | ±0.005" (±0.13mm) |
| 0.0625" (1.59mm) | ±0.0065" (±0.17mm) |
| 0.079" (2.0mm) | ±0.008" (±0.20mm) |
| 0.094" (2.38mm) | ±0.010" (±0.25mm) |
| 0.125" (3.18mm) | ±0.017" (±0.43mm) |

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