

# Material Properties

## General Purpose FVQM (F70)

### Material code: 501

General Purpose Fluorosilicone

**NOTE** - All testing done on AS568-214 size O-rings

<b>Original Properties</b>	<b>AMS-R-25988 Class 1 Type 1 Grade 70 and MIL-DTL-25988 Class 1 Type 1 Grade 70</b>	<b>Typical Values</b>
Hardness, Shore A, ASTM D2240	70 ±5	70
Tensile Strength, psi, ASTM D1414	750 min.	982
Elongation, %, ASTM D1414	125 min.	243
Specific Gravity, g/cc, ASTM D297	1.51 ± 0.03	1.51
<b>Heat Aged, ASTM D573, 70 hrs. at 437°F</b>		
Hardness change, Shore A, ASTM D2240	-5 to +10	+1
% Tensile Strength change, ASTM D1414	-25 max.	-10
% Elongation change, ASTM D1414	-25 max.	-3
% Weight loss, ASTM D297	-2 max.	-0.2
<b>Compression Set, ASTM D395 Method B and ASTM D1414, Times and Temperatures as noted</b>		
% Permanent set, 70 hrs. at 75°F	15 max.	3.5
% Permanent set, 22 hrs. at 347°F	30 max.	9.5
<b>Compression Set, ASTM D395 Method B and ASTM D1414, 70 hrs. at 392°F in AMS 3021 fluid</b>		
% Permanent set	30 max.	18.2
<b>AMS 3021 fluid immersion, ASTM D471 and ASTM D1414, 70hrs. at 392°F</b>		
Hardness change, Shore A, ASTM D2240	± 15	-8
% Tensile Strength change, ASTM D1414	-40 max.	-20
% Elongation change, ASTM D1414	-25 max.	-3
% Volume change, ASTM D471	+1 to +15	10.1
<b>TT-S-735 Type III Fuel Immersion, ASTM D471 and ASTM D1414, 22 hrs. at 75°F</b>		
Hardness change, Shore A, ASTM D2240	-20 max.	-9
% Tensile Strength change, ASTM D1414	-45 max.	-21
% Elongation change, ASTM D1414	-35 max.	-21
% Volume change, ASTM D471	+1 to +25	+17.3
<b>Temperature Retraction, ASTM D1329</b>		
TR-10, °F	-70 max.	-83

**Note:** Property values should be interpreted as typical rather than minimum value. All technical information and recommendations are presented in good faith, and based upon laboratory and real-world tests believe to be reliable and practical. However, K.C. Seals, Inc. cannot guarantee the accuracy or completeness of this information, and it is the customers' responsibility to determine product suitability to any given application.

