



**COMPOUND:** 700RE

**POLYMER:** Polytetrafluoroethylene (PTFE)

**DESCRIPTION:** Unfilled PTFE, Ram Extruded Stock Shapes and Machined parts

Property	Test Method	Internal Specification	AMS 3659B Specification	Typical Values	Units
Specific Gravity	ASTM D792	2.14 – 2.20	2.14 – 2.19 <sup>a</sup> 2.15 – 2.20 <sup>b</sup> 2.15 – 2.20 <sup>c</sup> 2.14 – 2.19 <sup>d</sup>	2.16	-
Hardness	ASTM D2240	55 - 65		60	SHORE-D
Tensile Strength at Break	ASTM D1708 & D1710	2,100 (14.48) Minimum	1,800 (12.41) <sup>a</sup> 1,900 (13.10) <sup>b</sup> 2,000 (13.79) <sup>c</sup> 1,800 (12.41) <sup>d</sup>	2,700 (18.62)	PSI (MPa)
Elongation at Break	ASTM D1708 & D1710	210 Minimum	150 <sup>a</sup> 175 <sup>b</sup> 200 <sup>c</sup> 150 <sup>d</sup>	275	%
Dielectric Strength	ASTM D149		700 <sup>a</sup> 750 <sup>b</sup> 800 <sup>c</sup> 700 <sup>d</sup>	1,100	V/mil
Compressive Strength @ 0.2% Offset @ Maximum load	ASTM D695			1,500 (10.34) 3,500 (24.13)	PSI (MPa)
Compressive Modulus	ASTM D695			70,000 (482.63)	PSI (MPa)
Flexural Strength	ASTM D790			No Break	PSI (MPa)
Flexural Modulus	ASTM D790			72,000 (496.42)	PSI (MPa)
Total Deformation Under Load @ 24 Hrs, 2,000 PSI, 70 °F	ASTM D621			12.5 (Axial) 12.7 (Radial)	%
Permanent Deformation after 24 Hrs Relaxation	ASTM D621			5.9 (Axial) 6.5 (Radial)	%
Coefficient of Linear Thermal Expansion 70 - 200 °F (21.1 – 93.3 °C) 70 - 300 °F (21.1 – 148.9 °C) 70 – 400 °F (21.1 – 204.4 °C)	ASTM E831			6.80 (12.24) 7.04 (12.67) 7.60 (13.68)	X 10 <sup>-5</sup> °F <sup>-1</sup> (°C <sup>-1</sup> )

Notes: a – Rods < 0.5" dia, b – Rods 0.5" – 1.5" dia, c – Rods > 1.5" dia, d – Tubes all sizes

**REVISION HISTORY**

REV. NONE – Initial Release, 10-2-2016 RSK

REV. A – Modified typical property values, Deleted Applications/Compliance & Modified data sheet format, 8-27-2020 RSK

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