

Material Properties: Simriz® 485 (FFKM)

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

Original Properties	Simriz 485
Color	Black
Hardness, Shore A, ASTM D2240	76
Tensile Strength, MPa, ASTM D1414	18.5
Tensile Strength, psi, ASTM D1414	2680
Ultimate Elongation, %, ASTM D1414	195
100% Modulus, MPa, ASTM D1414	5.7
100% Modulus, psi, ASTM D1414	825
Temperature Retraction, ASTM D1329	
TR-10, degrees C	-4
Compression Set, ASTM D1414 and ASTM D395 Method B, AS568-214 size O-rings, times and temperatures as noted	
% Permanent Set, 70 hours at 200°C	23
% Permanent Set, 500 hours at 200°C	31
% Permanent Set, 1,000 hours at 200°C	40
% Permanent Set, 70 hours at 250°C	45
Water Bomb Immersion, ASTM D471, 70 hrs. at 200°C	
Volume Change, %	+5.1
Steam Immersion, ASTM D471, times and temperatures as noted	
% Volume change, 70 hours at 160°C	+2.0
% Volume change, 500 hours at 160°C	+3.0
% Volume change, 1,000 hours at 160°C	+3.0
Hexamethylene Diamine Immersion, ASTM D471, 70 hrs. at 140°C	
% Volume change	+6.8
Acetone Immersion, ASTM D471, 70 hrs. at 23°C	
% Volume change	+0.5
20% Nitric Acid Immersion, ASTM D471, 70 hrs. at 100°C	
% Volume change	+12.0

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