

Freudenberg Simrit N456 Nitrile Elastomer (NBR)

Category : Polymer , Thermoset , Rubber or Thermoset Elastomer (TSE)

Material Notes:

General Purpose; Internal Lubricant. Inferior resistance to ozone, sunlight and natural aging; poor resistance to oxygenated solvents. All testing done on AS568-214 size o-rings

Order this product through the following link:

http://www.lookpolymers.com/polymer_Freudenberg-Simrit-N456-Nitrile-Elastomer-NBR.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.24 g/cc	1.24 g/cc	ASTM D297

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	77	77	ASTM D2240
	75	75	ARM 201 fluid immersion, 70 hrs.; ASTM D2240
	@Temperature 275 Â°C	@Temperature 527 Â°F	
Tensile Strength, Ultimate	80	80	MIL-H-83282 fluid immersion, 70 hrs.; ASTM D2240
	@Temperature 275 Â°C	@Temperature 527 Â°F	
	7.186 MPa	1042 psi	ARM 201 fluid immersion, 70 hrs. at 275Â°F; ASTM D1414
Elongation at Break	8.693 MPa	1261 psi	MIL-H-83282 fluid immersion, 70 hrs. at 275Â°F; ASTM D1414
	11.59 MPa	1681 psi	ASTM D1414
	115.2 %	115.2 %	MIL-H-83282 fluid immersion, 70 hrs. at 275Â°F; ASTM D141
100% Modulus	123.2 %	123.2 %	ARM 201 fluid immersion, 70 hrs. at 275Â°F; ASTM D141
	160 %	160 %	ASTM D141
	0.00486 GPa	0.705 ksi	ASTM D1414
Compression Set	26.4 %	26.4 %	ARM 201 fluid immersion; ASTM D395
	@Temperature 135 Â°C, Time 252000 sec	@Temperature 275 Â°F, Time 70.0 hour	
	31.5 %	31.5 %	MIL-H-83282 fluid immersion; ASTM D395
	@Temperature 135 Â°C, Time 252000 sec	@Temperature 275 Â°F, Time 70.0 hour	
	64.3 %	64.3 %	
	@Temperature 135 Â°C, Time 252000 sec	@Temperature 275 Â°F, Time 70.0 hour	ASTM D395

Mechanical Properties	Time 252000 sec Metric	Time 70.0 hour English	Comments
Thermal Properties	Metric	English	Comments
Minimum Service Temperature, Air	-56.7 Â°C	-70.0 Â°F	Retraction Temperature, TR10; ASTM D1329
	-50.0 Â°C	-58.0 Â°F	Retraction Temperature, ARM 201 fluid immersion, 70 hrs. at 275Â°F; ASTM D1329
	-49.4 Â°C	-57.0 Â°F	Retraction Temperature, MIL-H-83282 fluid immersion, 70 hrs. at 275Â°F; ASTM D1329

Descriptive Properties	Value	Comments
Corrosion and Adhesion	Slight	4130 Steel, Aircraft Quality, MIL-S-18729
Volume Change (%), ASTM D471	14.6	ARM 201 fluid immersion, 70 hrs. at 275Â°F
	2.5	MIL-H-83282 fluid immersion, 70 hrs. at 275Â°F

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