

Freudenberg Simrit N445 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-N445-Nitrile-Elastomer-NBR.php

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	71	71	Original Properties; ASTM D2240
	67	67	ASTM IRM 903 Oil Immersion, 70 hours; ASTM D2240
	@Temperature 100 Â°C	@Temperature 212 Â°F	
	72	72	ASTM #1 Oil Immersion, 70 hours; ASTM D2240
	@Temperature 100 Â°C	@Temperature 212 Â°F	
73	73	Air age, 70 hours; ASTM D2240	
	@Temperature 100 Â°C	@Temperature 212 Â°F	
Tensile Strength, Ultimate	12.9 MPa	1870 psi	Original Properties; ASTM D412 Die C
	12.65 MPa	1835 psi	Air age, 70 hours; ASTM D412 Die C
	@Temperature 100 Â°C	@Temperature 212 Â°F	
	13.56 MPa	1966 psi	ASTM #1 Oil Immersion, 70 hours; ASTM D412 Die C
	@Temperature 100 Â°C	@Temperature 212 Â°F	
129.3 MPa	18750 psi	ASTM IRM 903 Oil Immersion, 70 hours; ASTM D412 Die C	
	@Temperature 100 Â°C	@Temperature 212 Â°F	
Elongation at Break	602 %	602 %	Original Properties; ASTM D412 Die C
	481.6 %	481.6 %	Air age, 70 hours; ASTM D412 Die C
	@Temperature 100 Â°C	@Temperature 212 Â°F	
	529.76 %	529.76 %	ASTM #1 Oil Immersion, 70 hours; ASTM D412 Die C
	@Temperature 100 Â°C	@Temperature 212 Â°F	
540 %	540 %	ASTM IRM 903 Oil Immersion, 70 hours; ASTM D412 Die C	
	@Temperature 100 Â°C	@Temperature 212 Â°F	
Compression Set	16 %	16 %	ASTM D395
	@Temperature 100 Â°C,	@Temperature 212 Â°F,	

Mechanical Properties	Time 79200 sec Metric	Time 22.0 hour English	Comments
Descriptive Properties	Value	Comments	
Volume Change (%), ASTM D471	-2.6	ASTM #1 Oil Immersion, 70 hours at 150Â°C	
	9.6	ASTM IRM Oil Immersion, 70 hours at 100Â°C	

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