

Seals Eastern 7168 Nitrile Rubber

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Elastomer, Melt-Processible Rubber

Material Notes:

Nitrile for oil & gas service Information provided by Seals Eastern, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Seals-Eastern-7168-Nitrile-Rubber.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.278 g/cc	1.278 g/cc	ASTM D297, 15

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	>= 77	>= 77	ASTM D2240, Type A
	83	83	AVG; ASTM D2240, Type A
	83	83	After Dry Heat Aging; ASTM D865
	@Temperature 100 °C, Time 252000 sec	@Temperature 212 °F, Time 70.0 hour	
	87	87	After Dry Heat Aging; ASTM D865
	@Temperature 100 °C, Time 605000 sec	@Temperature 212 °F, Time 168 hour	
88	88	After Dry Heat Aging; ASTM D865	
@Temperature 100 °C, Time 1.21e+6 sec	@Temperature 212 °F, Time 336 hour		
89	89	After Dry Heat Aging; ASTM D865	
@Temperature 100 °C, Time 3.60e+6 sec	@Temperature 212 °F, Time 1000 hour		
Tensile Strength at Break	>= 18.49 MPa	>= 2682 psi	ASTM D412 Method A
	24.52 MPa	3556 psi	AVG; ASTM D412 Method A
	25.376 MPa	3680.5 psi	After Dry Heat Aging; ASTM D865
	@Temperature 100 °C, Time 252000 sec	@Temperature 212 °F, Time 70.0 hour	
	25.94 MPa	3762 psi	After Dry Heat Aging; ASTM D865
	@Temperature 100 °C, Time 605000 sec	@Temperature 212 °F, Time 168 hour	
26.58 MPa	3855 psi	After Dry Heat Aging; ASTM D865	
@Temperature 100 °C, Time 3.60e+6 sec	@Temperature 212 °F, Time 1000 hour		

Mechanical Properties	Metric MPa	English [†]	Comments
	@Temperature 100 °C, Time 1.21e+6 sec	@Temperature 212 °F, Time 336 hour	After Dry Heat Aging; ASTM D865
Tensile Strength, Yield	>= 2.04 MPa	>= 296 psi	Stress at Elongation M50; ASTM D412 Method A
	3.47 MPa	503 psi	AVG Stress at Elongation M25; ASTM D412 Method A
	>= 3.98 MPa	>= 577 psi	Stress at Elongation M100; ASTM D412 Method A
	5.40 MPa	783 psi	AVG Stress at Elongation M50; ASTM D412 Method A
	10.53 MPa	1527 psi	AVG Stress at Elongation M100; ASTM D412 Method A
Elongation at Break	>= 200 %	>= 200 %	ASTM D412 Method A
	330 %	330 %	AVG; ASTM D412 Method A
	199.6 %	199.6 %	
	@Temperature 100 °C, Time 3.60e+6 sec	@Temperature 212 °F, Time 1000 hour	After Dry Heat Aging; ASTM D865
	237 %	237 %	
	@Temperature 100 °C, Time 605000 sec	@Temperature 212 °F, Time 168 hour	After Dry Heat Aging; ASTM D865
	255.7 %	255.7 %	
	@Temperature 100 °C, Time 1.21e+6 sec	@Temperature 212 °F, Time 336 hour	After Dry Heat Aging; ASTM D865
	298.3 %	298.3 %	
	@Temperature 100 °C, Time 252000 sec	@Temperature 212 °F, Time 70.0 hour	After Dry Heat Aging; ASTM D865
Modulus of Elasticity	0.02373 GPa	3.442 ksi	ASTM D412 Method A
Shear Modulus	0.007908 GPa	1.147 ksi	ASTM D412 Method A
Secant Modulus	0.02219 GPa	3.219 ksi	ASTM D412 Method A
Compression Set	10.6 %	10.6 %	
	@Temperature 100 °C, Time 79200 sec	@Temperature 212 °F, Time 22.0 hour	ASTM D395, Test B
	12.1 %	12.1 %	
	@Temperature 100 °C, Time 252000 sec	@Temperature 212 °F, Time 70.0 hour	ASTM D395, Test B
	23.3 %	23.3 %	

Mechanical Properties	Metric	English	ASTM D395, Test B Comments
	@ Temperature 100 °C, Time 1.21e+6 sec	@ Temperature 212 °F, Time 336 hour	

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	-25.0 °C	-13.0 °F	ASTM D1329

Descriptive Properties	Value	Comments
Strain Energy / Unit Volume at 20% Elongation (psi)	61	

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