

Seals Eastern 7145 Fluorocarbon-Elastomer

Category : Polymer , Thermoset , Fluoropolymer, TS , Thermoset Fluoroelastomer , Rubber or Thermoset Elastomer (TSE)

Material Notes:

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

Order this product through the following link:

http://www.lookpolymers.com/polymer_Seals-Eastern-7145-Fluorocarbon-Elastomer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.943 g/cc	1.943 g/cc	ASTM D297, 15

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	>= 75	>= 75	ASTM D2240, Type A
	78	78	AVG; ASTM D2240, Type A
	78	78	After Dry Heat Aging; ASTM D865
	@Temperature 200 Â°C, Time 252000 sec	@Temperature 392 Â°F, Time 70.0 hour	
	78	78	
	@Temperature 200 Â°C, Time 1.21e+6 sec	@Temperature 392 Â°F, Time 336 hour	After Dry Heat Aging; ASTM D865
	79	79	After Dry Heat Aging; ASTM D865
	@Temperature 200 Â°C, Time 3.60e+6 sec	@Temperature 392 Â°F, Time 1000 hour	
	79	79	
	@Temperature 200 Â°C, Time 605000 sec	@Temperature 392 Â°F, Time 168 hour	After Dry Heat Aging; ASTM D865
Tensile Strength at Break	>= 12.98 MPa	>= 1883 psi	ASTM D412 Method A
	19.3 MPa	2800 psi	AVG; ASTM D412 Method A
	16.99 MPa	2464 psi	After Dry Heat Aging; ASTM D865
	@Temperature 200 Â°C, Time 252000 sec	@Temperature 392 Â°F, Time 70.0 hour	
	18.3 MPa	2660 psi	
	@Temperature 200 Â°C, Time 1.21e+6 sec	@Temperature 392 Â°F, Time 336 hour	After Dry Heat Aging; ASTM D865
	18.92 MPa	2744 psi	After Dry Heat Aging; ASTM D865
	@Temperature 200 Â°C, Time 605000 sec	@Temperature 392 Â°F, Time 168 hour	

Mechanical Properties	Metric ¹ MPa	English ¹	Comments
	@Temperature 200 Â°C, Time 360000 sec	@Temperature 392 Â°F, Time 100 hour	After Dry Heat Aging; ASTM D865
Tensile Strength, Yield	2.11 MPa	306 psi	AVG Stress at Elongation M25; ASTM D412 Method A
	>= 2.76 MPa	>= 400 psi	Stress at Elongation M50; ASTM D412 Method A
	3.75 MPa	544 psi	AVG Stress at Elongation M50; ASTM D412 Method A
	>= 4.81 MPa	>= 698 psi	Stress at Elongation M100; ASTM D412 Method A
	8.48 MPa	1230 psi	AVG Stress at Elongation M100; ASTM D412 Method A
Elongation at Break	>= 118 %	>= 118 %	ASTM D412 Method A
	180 %	180 %	AVG; ASTM D412 Method A
	183.6 %	183.6 %	
	@Temperature 200 Â°C, Time 252000 sec	@Temperature 392 Â°F, Time 70.0 hour	After Dry Heat Aging; ASTM D865
	183.6 %	183.6 %	
	@Temperature 200 Â°C, Time 1.21e+6 sec	@Temperature 392 Â°F, Time 336 hour	After Dry Heat Aging; ASTM D865
	198 %	198 %	
	@Temperature 200 Â°C, Time 605000 sec	@Temperature 392 Â°F, Time 168 hour	After Dry Heat Aging; ASTM D865
	203.4 %	203.4 %	
	@Temperature 200 Â°C, Time 360000 sec	@Temperature 392 Â°F, Time 100 hour	After Dry Heat Aging; ASTM D865
Modulus of Elasticity	0.01233 GPa	1.788 ksi	ASTM D412 Method A
Shear Modulus	0.00411 GPa	0.596 ksi	ASTM D412 Method A
Secant Modulus	0.01159 GPa	1.681 ksi	ASTM D412 Method A
Tear Strength Test	210	210	(psi); ASTM D624, Die B
Compression Set	11 %	11 %	
	@Temperature 200 Â°C, Time 79200 sec	@Temperature 392 Â°F, Time 22.0 hour	ASTM D395, Test B
	19 %	19 %	
	@Temperature 200 Â°C, Time 252000 sec	@Temperature 392 Â°F, Time 70.0 hour	ASTM D395, Test B

Mechanical Properties	Metric	English	Comments
	@Temperature 200 Â°C, Time 1.21e+6 sec	@Temperature 392 Â°F, Time 336 hour	ASTM D395, Test B

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	-20.0 Â°C	-4.00 Â°F	ASTM D1329

Processing Properties	Metric	English	Comments
Shelf Life	180 Month	180 Month	ASTM D395, Test B

Descriptive Properties	Value	Comments
Strain Energy / Unit Volume at 20% Elongation (psi)	32	

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