

Seals Eastern 7182D Fluorocarbon-Elastomer

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

Material Notes:

Formulated AFLASÂ® high-temperature "sour" oil & gas service. Excellent acid and base resistance. Information provided by Seals Eastern, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Seals-Eastern-7182D-Fluorocarbon-Elastomer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.55 g/cc	1.55 g/cc	ASTM D297, 15

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	>= 75	>= 75	ASTM D2240, Type A
	85	85	AVG; ASTM D2240, Type A
	81	81	After Dry Heat Aging; ASTM D865
	@Temperature 200 Â°C, Time 3.60e+6 sec	@Temperature 392 Â°F, Time 1000 hour	
	84	84	After Dry Heat Aging; ASTM D865
	@Temperature 200 Â°C, Time 1.21e+6 sec	@Temperature 392 Â°F, Time 336 hour	
85	85	After Dry Heat Aging; ASTM D865	
@Temperature 200 Â°C, Time 252000 sec	@Temperature 392 Â°F, Time 70.0 hour		
Tensile Strength at Break	>= 19.0 MPa	>= 2750 psi	ASTM D412 Method A
	20.7 MPa	3000 psi	AVG; ASTM D412 Method A
	17.4 MPa	2520 psi	After Dry Heat Aging; ASTM D865
	@Temperature 200 Â°C, Time 3.60e+6 sec	@Temperature 392 Â°F, Time 1000 hour	
	19.2 MPa	2790 psi	After Dry Heat Aging; ASTM D865
	@Temperature 200 Â°C, Time 1.21e+6 sec	@Temperature 392 Â°F, Time 336 hour	
20.1 MPa	2910 psi	After Dry Heat Aging; ASTM D865	

Mechanical Properties	Metric @Temperature 200 Â°C, Time 252000 sec	English @Temperature 392 Â°F, Time 70.0 hour	Comments
	20.7 MPa	3000 psi	
	@Temperature 200 Â°C, Time 605000 sec	@Temperature 392 Â°F, Time 168 hour	After Dry Heat Aging; ASTM D865
Tensile Strength, Yield	2.31 MPa	335 psi	AVG Stress at Elongation M25; ASTM D412 Method A
	>= 2.41 MPa	>= 350 psi	Stress at Elongation M50; ASTM D412 Method A
	4.32 MPa	627 psi	AVG Stress at Elongation M50; ASTM D412 Method A
	>= 5.46 MPa	>= 792 psi	Stress at Elongation M100; ASTM D412 Method A
	9.211 MPa	1336 psi	AVG Stress at Elongation M100; ASTM D412 Method A
Elongation at Break	>= 160 %	>= 160 %	ASTM D412 Method A
	229 %	229 %	AVG; ASTM D412 Method A
	215.3 %	215.3 %	
	@Temperature 200 Â°C, Time 252000 sec	@Temperature 392 Â°F, Time 70.0 hour	After Dry Heat Aging; ASTM D865
	272.5 %	272.5 %	
	@Temperature 200 Â°C, Time 605000 sec	@Temperature 392 Â°F, Time 168 hour	After Dry Heat Aging; ASTM D865
	313.7 %	313.7 %	
	@Temperature 200 Â°C, Time 3.60e+6 sec	@Temperature 392 Â°F, Time 1000 hour	After Dry Heat Aging; ASTM D865
	316 %	316 %	
	@Temperature 200 Â°C, Time 1.21e+6 sec	@Temperature 392 Â°F, Time 336 hour	After Dry Heat Aging; ASTM D865
Modulus of Elasticity	0.01284 GPa	1.862 ksi	ASTM D412 Method A
Shear Modulus	0.00428 GPa	0.621 ksi	ASTM D412 Method A
Secant Modulus	0.0121 GPa	1.75 ksi	ASTM D412 Method A
Tear Strength Test	296	296	(psi); ASTM D624, Die B
Compression Set	22 %	22 %	
	@Temperature 200 Â°C, Time 79200 sec	@Temperature 392 Â°F, Time 22.0 hour	ASTM D395, Test B
	28 %	28 %	

Mechanical Properties	Metric	English	ASTM D395, Test B Comments
	@ Temperature 200 Â°C, Time 252000 sec	@ Temperature 392 Â°F, Time 70.0 hour	
	43 %	43 %	
	@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
Maximum Service Temperature, Air	218 Â°C	425 Â°F	ASTM D1329
Minimum Service Temperature, Air	2.22 Â°C	36.0 Â°F	Retraction Temperature, TR10; ASTM D1329
Brittleness Temperature	-40.0 Â°C	-40.0 Â°F	ASTM D746
Glass Transition Temp, Tg	2.78 Â°C	37.0 Â°F	ASTM D1329

Processing Properties	Metric	English	Comments
Shelf Life	240 Month	240 Month	ASTM D395, Test B

Descriptive Properties	Value	Comments
Strain Energy / Unit Volume at 20% Elongation (psi)	33	

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