3M Dyneon™ PFE 133TBZ High Temperature Perfluoroelastomer

Category : Polymer , Thermoset , Fluoropolymer, TS , Thermoset Fluoroelastomer

Material Notes:

3M™ Dyneon™ PFE 133TBZ is a technically advanced high temperature perfluorelastomer (HT PFE). It is designed to meet the challenges of higher temperature plasma applications. It is classified as FFKM per ASTM D1418. Its fully fluorinated backbone structure provides a very broad chemical and thermal stabilityFeatures and Benefits:Upper use temperature of 315°CExcellent compression set resistance offering enhanced sealing force retention and seal lifeIdeal for dry side (thermal processes) semiconductor applications including plasmaLow metal ion content with low extractablesInformation provided by 3M

Order this product through the following link:
http://www.lookpolymers.com/polymer_3M-Dyneon-PFE-133TBZ-High-Temperature-Perfluoroelastomer.php

Physical Properties	Metric	English	Comments
Density	2.00 g/cc	0.0723 lb/in³	
Mooney Viscosity	110 @Temperature 121 °C	110 @Temperature 250 °F	ML (1+10)

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	79	79	Press Cure 15 Minutes @ 188°C (370°F), Post Cure 24 Hours @ 250°C (482°F); ASTM D2240
Tensile Strength at Break	16.0 MPa	2320 psi	Press Cure 15 Minutes @ 188°C (370°F), Post Cure 24 Hours @ 250°C (482°F)
Elongation at Break	192 %	192 %	Press Cure 15 Minutes @ 188°C (370°F), Post Cure 24 Hours @ 250°C (482°F)
100% Modulus	0.00910 GPa	1.32 ksi	Press Cure 15 Minutes @ 188°C (370°F), Post Cure 24 Hours @ 250°C (482°F)
Compression Set	26 % @Temperature 232 °C, Time 252000 sec	26 % @Temperature 450 °F, Time 70.0 hour	-214 O-rings, 25% Deformation; ASTM D395 Method B
	39 % @Temperature 232 °C, Time 605000 sec	39 % @Temperature 450 °F, Time 168 hour	-214 O-rings, 25% Deformation; ASTM D395 Method B
	60 % @Temperature 300 °C, Time 252000 sec	60 % @Temperature 572 °F, Time 70.0 hour	-214 O-rings, 25% Deformation; ASTM D395 Method B

Thermal Properties	Metric	English	Comments

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	315 °C	599 °F	
Brittleness Temperature	-35.0 °C	-31.0 °F	
Transformation Temperature	-2.00 °C	28.4 °F	TR 10

Descriptive Properties	Value	Comments
Color	White	
Form	Crumb	
MH, Maximum Torque	15.5 In-lb	100 cpm, 0.5° Arc, 15 Minutes @ 188°C (370°F), ASTM D5289
ML, Minimum Torque	1.5 In-lb	100 cpm, 0.5° Arc, 15 Minutes @ 188°C (370°F), ASTM D5289
t'50, Time to 50% Cure	2.7 minutes	100 cpm, 0.5° Arc, 15 Minutes @ 188°C (370°F), ASTM D5289
t'90, Time to 90% Cure	5.8 minutes	100 cpm, 0.5° Arc, 15 Minutes @ 188°C (370°F), ASTM D5289
ts2, Time to 2 Inch-lb Rise from Minimum	1.8 minutes	100 cpm, 0.5° Arc, 15 Minutes @ 188°C (370°F), ASTM D5289

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