

## 3M Dyneon™ 131TZ High Temperature Perfluoroelastomer

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

### Material Notes:

3M™ Dyneon™ 131TZ is a technically advanced high temperature perfluoroelastomer (HT PFE). It is designed to meet the challenges of higher temperature applications. It is classified as FFKM per ASTM D1418. Its fully fluorinated back bone structure provides a very broad chemical and thermal stability. Features and Benefits: Ideal for dry side (thermal processes) semiconductor applications including plasma, and high temperature CPI and aerospace applications High temperature FFKM Low metal ion content with low extractables Upper use temperature of 315°C Excellent compression set resistance Can be compounded to pass AMS 7257C Information provided by the Dyneon division of 3M.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_3M-Dyneon-131TZ-High-Temperature-Perfluoroelastomer.php](http://www.lookpolymers.com/polymer_3M-Dyneon-131TZ-High-Temperature-Perfluoroelastomer.php)

Physical Properties	Metric	English	Comments
Specific Gravity	2.00 g/cc	2.00 g/cc	
Mooney Viscosity	80 @Temperature 121 °C	80 @Temperature 250 °F	ML 1+ 10

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	77	77	Press Cure 10 Minutes @ 188°C, Post Cure 16 Hours @ 250°C
Tensile Strength at Break	15.9 MPa	2310 psi	Press Cure 10 Minutes @ 188°C, Post Cure 16 Hours @ 250°C
Elongation at Break	165 %	165 %	Press Cure 10 Minutes @ 188°C, Post Cure 16 Hours @ 250°C
100% Modulus	0.00910 GPa	1.32 ksi	Press Cure 10 Minutes @ 188°C, Post Cure 16 Hours @ 250°C
Compression Set	20 %	20 %	Method B, -214 O-rings, Aged 70 Hours, 25% Deformation; ASTM D395
	@Treatment Temp. 232 °C, Time 252000 sec	@Treatment Temp. 450 °F, Time 70.0 hour	
	25 %	25 %	
	@Treatment Temp. 232 °C, Time 605000 sec	@Treatment Temp. 450 °F, Time 168 hour	
	43 %	43 %	
	@Treatment Temp. 300 °C, Time 252000 sec	@Treatment Temp. 572 °F, Time 70.0 hour	Method B, -214 O-rings, Aged 70 Hours, 18% Deformation; ASTM D395
	52 %	52 %	Method B, -214 O-rings, Aged 70

Mechanical Properties	@Treatment Temp. 300 Metric	@Treatment Temp. 572 English	Hours, 18% Deformation; ASTM D395 Comments
	Time 252000 sec	Time 70.0 hour	

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	TR10

Descriptive Properties	Value	Comments
Color	White	
Form	Crumb	
MH, Maximum Toque	17.8 Inch-lb	100 cpm, 0.5° Arc, 12 Minutes @ 188°C, ASTM D5289
ML, Minimum Torque	1.2 Inch-lb	100 cpm, 0.5° Arc, 12 Minutes @ 188°C, ASTM D5289
t2, Time to 2 Inch-lb Rise from Minimum	2.4 Minutes	100 cpm, 0.5° Arc, 12 Minutes @ 188°C, ASTM D5289
t'50, Time to 50% Cure	3.6 Minutes	100 cpm, 0.5° Arc, 12 Minutes @ 188°C, ASTM D5289
t'90, Time to 90% Cure	7.0 Minutes	100 cpm, 0.5° Arc, 12 Minutes @ 188°C, ASTM D5289

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