

3M Dyneon™ FC 2181 Fluoroelastomer

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

Material Notes:

3M™ Dyneon™ Fluoroelastomer FC 2181 can be compounded using standard water cooled internal mixers or two-roll mills with standard fillers and ingredients utilized in typical fluoroelastomer formulations. The “dry” ingredients should be blended before adding to the masticated gum. For best results, Dyneon FC 2181 should be banded on the mill several minutes prior to adding the blended dry ingredients. Once mixed, the compounded stocks have good scorch resistance and storage stability. Composition: di-polymer of vinylidene fluoride and hexafluoropropylene Medium viscosity Process targets: compression and transfer molding, and calendering Proprietary incorporated cure technology Excellent demolding of complex geometric profiles Information provided by Dyneon, A 3M Company

Order this product through the following link:

http://www.lookpolymers.com/polymer_3M-Dyneon-FC-2181-Fluoroelastomer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.80 g/cc	1.80 g/cc	
Mooney Viscosity	44 @Temperature 121 °C	44 @Temperature 250 °F	ML1+10

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	72	72	Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C; ASTM D2240
Tensile Strength at Break	17.7 MPa	2560 psi	Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C
Elongation at Break	240 %	240 %	Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C
100% Modulus	0.00476 GPa	0.690 ksi	Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C
Compression Set	13 %	13 %	Aged 70 hours @ 200°C, -214 O-rings; ASTM D395 Method B

Thermal Properties	Metric	English	Comments
Transformation Temperature	-18.0 °C	-0.400 °F	TR10; ASTM D1329

Component Elements Properties	Metric	English	Comments
Fluorine, F	65.9 %	65.9 %	

Descriptive Properties	Value	Comments
Color	Opaque Off-White	
MH, Maximum Torque		100 cpm, 0.5° Arc, 6 Minutes @ 177°C

Descriptive Properties	18.1 inch-lb Value	Comments
ML, Minimum Torque	1.6 inch-lb	100 cpm, 0.5° Arc, 6 Minutes @ 177°C
Solubility	Ketones and Esters	
t`50, Time to 50% cure	1.2 minutes	100 cpm, 0.5° Arc, 6 Minutes @ 177°C
t`90 - Time to 90% cure	1.7 minutes	100 cpm, 0.5° Arc, 6 Minutes @ 177°C
ts2 - Time to 2 in-lb rise from min	1 minutes	100 cpm, 0.5° Arc, 6 Minutes @ 177°C

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