

3M Dyneon™ FC 2121 Fluoroelastomer

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

Material Notes:

3M™ Dyneon™ Fluoroelastomer FC 2121 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 2121 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. Low viscosity. Process targets: injection and transfer molding, extrusion and calendaring. Proprietary incorporated cure technology. Utilizes FC 2174 cure technology. Information provided by Dyneon, A 3M Company

Order this product through the following link:

http://www.lookpolymers.com/polymer_3M-Dyneon-FC-2121-Fluoroelastomer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.80 g/cc	1.80 g/cc	
Mooney Viscosity	24 @Temperature 121 °C	24 @Temperature 250 °F	ML1+10

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	16.38 MPa	2375 psi	Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C
Elongation at Break	180 %	180 %	Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C
100% Modulus	0.007067 GPa	1.025 ksi	Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C
Compression Set	14 %	14 %	Aged 70 hours @ 200°C, O-rings -214; 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	21 inch-lb	100 cpm, 0.5° Arc, 6 Minutes @ 200°C, ASTM D5289
	22 inch-lb	100 cpm, 0.5° Arc, 6 Minutes @ 177°C, ASTM D5289

Descriptive Properties	Value	Comments
	0.8 inch-lb	100 cpm, 0.5° Arc, 6 Minutes @ 200°C, ASTM D5289
	0.8 inch-lb	100 cpm, 0.5° Arc, 6 Minutes @ 177°C, ASTM D5289
Solubility	Ketones and Esters	
t`50, Time to 50% cure	0.6 minutes	100 cpm, 0.5° Arc, 6 Minutes @ 200°C, ASTM D5289
	1.6 minutes	100 cpm, 0.5° Arc, 6 Minutes @ 177°C, ASTM D5289
t`90 - Time to 90% cure	0.8 minutes	100 cpm, 0.5° Arc, 6 Minutes @ 200°C, ASTM D5289
	2.3 minutes	100 cpm, 0.5° Arc, 6 Minutes @ 177°C, ASTM D5289
ts2 - Time to 2 in-lb rise from min	0.5 minutes	100 cpm, 0.5° Arc, 6 Minutes @ 200°C, ASTM D5289
	1.4 minutes	100 cpm, 0.5° Arc, 6 Minutes @ 177°C, ASTM D5289

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