Solvay Specialty Polymers HalarÂ® 513LC Ethylene Chlorotrifluoroethylene Copolymer (ECTFE)

Category : Polymer , Thermoplastic , Fluoropolymer , ETFE/ECTFE , ECTFE Fluoropolymer

Material Notes:

Low ViscosityUses: MonofilamentsAdditional Properties: Crystallization Heat - ASTM D3418 40.0 J/g; Heat of Fusion - ASTM D3418 42.0 J/g; Thermal Stability - TGA 405 Â°CInformation provided by Solvay Specialty Polymers.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Halar-513LC-Ethylene-Chlorotrifluoroethylene-Copolymer-ECTFE.php

Physical Properties	Metric	English	Comments
Density	1.68 g/cc	0.0607 lb/inÂ³	ASTM D792
Water Absorption at Saturation	<= 0.10 %	<= 0.10 %	ASTM D570
Linear Mold Shrinkage, Flow	0.025 cm/cm	0.025 in/in	
Melt Flow	19 g/10 min @Load 2.16 kg, Temperature 275 Â°C	19 g/10 min @Load 4.76 lb, Temperature 527 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	90	90	ASTM D785
Hardness, Shore D	75	75	ASTM D2240
Tensile Strength at Break	54.0 MPa	7830 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	30.0 MPa	4350 psi	50 mm/min; ASTM D638
Elongation at Break	250 %	250 %	50 mm/min; ASTM D638
Elongation at Yield	5.0 %	5.0 %	50 mm/min; ASTM D638
Tensile Modulus	1.66 GPa	241 ksi	50 mm/min; ASTM D638
Flexural Strength	47.0 MPa	6820 psi	2.5 mm/min; ASTM D790
Flexural Modulus	1.69 GPa	245 ksi	2.5 mm/min; ASTM D790
Izod Impact, Notched	2.10 J/cm @Thickness 3.20 mm, Temperature -40.0 Â°C	3.93 ft-lb/in @Thickness 0.126 in, Temperature -40.0 Â°F	ASTM D256
	NB @Thickness 3.20 mm, Temperature 23.0 Â°C	NB @Thickness 0.126 in, Temperature 73.4 Â°F	ASTM D256

Mechanical Properties	Metric	English	Comments
Coefficient of Friction, Dynamic	0.20	0.20	vs. Itself; ASTM D1894
Coefficient of Friction, Static	0.30	0.30	vs. Itself; ASTM D1894
Taber Abrasion, mg/1000 Cycles	5.0	5.0	CS-17 Wheel, 500 g; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	100 Âµm/m-Â°C	55.6 Âµin/in-Â°F	
Specific Heat Capacity	0.962 J/g-Â°C	0.230 BTU/lb-Â°F	ASTM C351
Thermal Conductivity	0.150 W/m-K @Temperature 40.0 Â°C	1.04 BTU-in/hr-ftÂ²-Â°F @Temperature 104 Â°F	ASTM C177
Melting Point	242 Â°C	468 Â°F	DSC
Crystallization Temperature	222 Â°C	432 Â°F	Peak; ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	90.0 Â°C	194 Â°F	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	65.0 Â°C	149 Â°F	Unannealed; ASTM D648
Brittleness Temperature	<= -76.0 Â°C	<= -105 Â°F	Procedure A; ASTM D746
Glass Transition Temp, Tg	85.0 Â°C	185 Â°F	ASTM E1356
Flammability, UL94	V-0	V-0	
Oxygen Index	52 %	52 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.50e+16 ohm-cm	5.50e+16 ohm-cm	ASTM D257
Dielectric Constant	2.57 @Frequency 1.00e+6 Hz	2.57 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	14.0 kV/mm @Thickness 3.18 mm	356 kV/in @Thickness 0.125 in	ASTM D149

Descriptive Properties	Value	Comments
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	

Descriptive Properties	Value	Comments
	Latin America North America	
Form	Pellets; Powder	
Processing Technique	Extrusion	

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