

Solvay Specialty Polymers Ajedumâ„ç Films -- HalarÂ® 500LC Ethylene Chlorotrifluoroethylene Copolymer (ECTFE)

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

Material Notes:

HalarÂ® ECTFE is a semi-crystalline fluoropolymer with a chemical structure of a 1:1 alternating copolymer of ethylene and chlorotrifluoroethylene. HalarÂ® film is a strong, hard, tough, abrasion resistant film that retains its useful properties over a broad range of temperatures. Its low temperature properties, especially those related to impact, are particularly outstanding. Features: Low Viscosity Uses: Aerospace Applications; Electrical/Electronic Applications; Industrial Applications; Outdoor Applications Additional Properties: Area Factor - 115 ftÂ²/lb/mil Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ajedum-Films-Halar-500LC-Ethylene-Chlorotrifluoroethylene-Copolymer-ECTFE.php

Physical Properties	Metric	English	Comments
Water Vapor Permeability	63.0 g mil/ (m ² day) @Pressure 0.101 MPa	4.06 g mil/ (100 in ² day) @Pressure 14.7 psi	ASTM F1249
Density	1.68 g/cc	0.0607 lb/inÂ³	ASTM D792
Water Absorption at Saturation	<= 0.10 %	<= 0.10 %	ASTM D570
Thickness	50.0 microns	1.97 mil	As Tested

Mechanical Properties	Metric	English	Comments
Film Elongation at Break, MD	280 %	280 %	ASTM D882
Film Elongation at Break, TD	280 %	280 %	ASTM D882
Secant Modulus, MD	1.55 GPa	225 ksi	ASTM D882
Secant Modulus, TD	1.50 GPa	218 ksi	ASTM D882
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
Film Tensile Strength at Break, MD	53.0 MPa	7690 psi	ASTM D882
Film Tensile Strength at Break, TD	50.0 MPa	7250 psi	ASTM D882

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	100 Âµm/m-Â°C	55.6 Âµin/in-Â°F	

Thermal Properties	Metric	English	Comments
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
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
Oxygen Index	52 %	52 %	ASTM D2863
Shrinkage	4.4 % @Temperature 200 Â°C	4.4 % @Temperature 392 Â°F	Free Shrinkage; ASTM D2732

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	Asia Pacific	
	Europe	
	Latin America	
	North America	

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