

Solvay Specialty Polymers Halar® 300DA Polyethylene, Chlorotrifluoroethylene (ECTFE) (Unverified Data**)&

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

Material Notes:

Halar® "DA" grades are available and meet the FDA's Condition of Use B, as described under 21 C.F.R. 176-170(c). Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Halar-300DA-Polyethylene-Chlorotrifluoroethylene-ECTFE-Unverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.68 g/cc	1.68 g/cc	ASTM D792
Water Absorption at Saturation	<= 0.10 %	<= 0.10 %	ASTM D570
Linear Mold Shrinkage, Flow	0.025 cm/cm	0.025 in/in	ASTM D955
Melt Flow	2.0 g/10 min @Load 2.16 kg, Temperature 275 °C	2.0 g/10 min @Load 4.76 lb, Temperature 527 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	90	90	R-Scale; ASTM D785
Hardness, Shore D	75	75	ASTM D2240
Tensile Strength at Break	54.0 MPa @Temperature 23.0 °C	7830 psi @Temperature 73.4 °F	50 mm/min; ASTM D638
Tensile Strength, Yield	30.0 MPa @Temperature 23.0 °C	4350 psi @Temperature 73.4 °F	50 mm/min; ASTM D638
Elongation at Break	250 % @Temperature 23.0 °C	250 % @Temperature 73.4 °F	50 mm/min; ASTM D638
Elongation at Yield	5.0 % @Temperature 23.0 °C	5.0 % @Temperature 73.4 °F	50 mm/min; ASTM D638
Tensile Modulus	1.66 GPa @Temperature 23.0 °C	241 ksi @Temperature 73.4 °F	50 mm/min; ASTM D638
Flexural Strength	47.0 MPa @Temperature 23.0 °C	6820 psi @Temperature 73.4 °F	2.5 mm/min; ASTM D790

Mechanical Properties	1.69 GPa Metric	245 ksi English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched	2.10 J/cm	3.93 ft-lb/in	ASTM D256
	@Thickness 3.20 mm, Temperature -40.0 °C	@Thickness 0.126 in, Temperature -40.0 °F	
	NB	NB	ASTM D256
	@Thickness 3.20 mm, Temperature 23.0 °C	@Thickness 0.126 in, Temperature 73.4 °F	
Coefficient of Friction, Dynamic	0.20	0.20	vs. Itself; ASTM D1894
Coefficient of Friction, Static	0.20	0.20	vs. Itself; ASTM D1894
Taber Abrasion, mg/1000 Cycles	5.0	5.0	CS-17 Wheel
	@Load 0.500 kg	@Load 1.10 lb	

Thermal Properties	Metric	English	Comments
Heat of Fusion	40.0 J/g	17.2 BTU/lb	Crystallization Heat; ASTM D3418
	42.0 J/g	18.1 BTU/lb	ASTM D3418
CTE, linear, Parallel to Flow	100 µm/m-°C	55.6 µin/in-°F	ASTM D696
Specific Heat Capacity	0.962 J/g-°C	0.230 BTU/lb-°F	ASTM D3418
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Thermal Conductivity	0.150 W/m-K	1.04 BTU-in/hr-ft²-°F	ASTM C177
	@Temperature 40.0 °C	@Temperature 104 °F	
Melting Point	242 °C	468 °F	ASTM D3418
Crystallization Temperature	222 °C	432 °F	Peak, DSC; ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	90.0 °C	194 °F	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	65.0 °C	149 °F	Unannealed; ASTM D648
Brittleness Temperature	<= -76.0 °C	<= -105 °F	ASTM D746A
Glass Transition Temp, Tg	85.0 °C	185 °F	DMA
Decomposition Temperature	405 °C	761 °F	1% mass loss, N2; TGA
Flammability, UL94	V-0	V-0	UL 94
Oxygen Index	52 %	52 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.50e+16 ohm-cm	5.50e+16 ohm-cm	50% RH; ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dielectric Constant	2.57	2.57	ASTM D150
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
Dielectric Strength	14.0 kV/mm	356 kV/in	ASTM D149
	@Thickness 3.20 mm, Temperature 23.0 °C	@Thickness 0.126 in, Temperature 73.4 °F	

Descriptive Properties	Value	Comments
Agency Ratings	FDA 21 CFR 176.170(c) Condition of Use B	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Medium Viscosity	
Forms	Pellets	
	Powder	
Generic	ECTFE	
Processing Method	Extrusion	

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