

Westlake ECTFE

Ethylene Chlorotrifluoroethylene Copolymer

Westlake Plastics Company

Message:

Made from HALAR® ethylene-chlorotrifluoroethylene resin, these products are virtually unaffected by most common corrosive chemicals. ECTFE products have excellent chemical and mechanical properties, impact strength, and a broad service use temperature. This polymer offers extremely low permeability to liquids, gases, and vapors.

Applications Include:

Semiconductor process equipment

Chemical storage, fluid handling

Fire safe componentry

Advantages of ECTFE:

High purity

Flame resistant

Impact resistant

Excellent weatherability

Low permeability

UL V-0, FM 4910

General Information			
Features	Flame Retardant		
	Good Chemical Resistance		
	Good Weather Resistance		
	High Impact Resistance		
	High Purity		
	Low Gas Permeability		
	Low Liquid Permeability		
Appearance	Beige		
	Natural Color		
Forms	Film		
	Rod		
	Sheet		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.68	g/cm ³	ASTM D792
Water Absorption (24 hr)	< 0.10	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	75		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1650	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	29.6	MPa	

Break	53.8	MPa	
Tensile Elongation			ASTM D638
Yield	5.0	%	
Break	250	%	
Flexural Modulus	1690	MPa	ASTM D790
Flexural Strength	46.9	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	No Break		ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	90.0	°C	
1.8 MPa, Unannealed	62.8	°C	
Continuous Use Temperature	149	°C	
Melting Temperature	240	°C	ASTM D4591
CLTE - Flow	1.0E-4	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (0.0254 mm)	79	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	2.50		ASTM D150
Dissipation Factor (1 kHz)	1.6E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Oxygen Index	56	%	ASTM D2863

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