

ECTFE

(ethylene-chlorotrifluoroethylene)

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.

The following physical property information is based on typical values of the base HALAR 901 resin.

	Units	ASTM Test	Result
Mechanical			
Flexural Modulus	psi	D790	245,000
Flexural Strength	psi	D790	6,800
Hardness-Shore D	—	D2240	D75
Izod Impact Strength-Notched	ft•lbs/in	D256	No Break
Tensile Elongation			
@break	%	D638	250
@yield	%	D638	5.0
Tensile Modulus	psi	D638	240,000
Tensile Strength			
@break	psi	D638	7,800
@yield	psi	D638	4,300
Thermal			
Coefficient of Thermal Expansion	in/in/°F	D696	5.6x10 ⁻⁵
Continuous Use Temperature	°F	—	300
Flammability Rating-UL94	—	—	V-0
Heat Deflection Temperature			
@66 psi	°F	D648	194.0
@264 psi	°F	D648	145.0
Limiting Oxygen Index	%	D2863	56
Melt Temperature	°F	D4591	464
Electrical			
Dielectric Constant @1kHz	—	D150	2.5
Dielectric Strength @1mil	V/mil	D149	2,000
Dissipation Factor @1kHz	—	D150	0.0016
Other			
Specific Gravity	—	D792	1.68
Water Absorption @24 hours	%	D570	<0.10

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Westlake Product Bulletin



ECTFE components in a wet process tool

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

Manufacturing Capabilities:

Halar 300:

Film: .002" to .029" thick

Halar 901:

Sheet (Extruded): .030" to 2" thick

Sheet (Fabric Backed): .060" to 3/16" thick

Welding Rod: 1/8" and 5/32" diameter

Halar 600:

Rod: 3/8" to 5" diameter

Color/Grades:

Natural Beige (custom colors available)

*In addition to our standard capabilities, Westlake also has the ability to process custom resins in various sizes and colors with some exceptions.

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