

Halar® 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.

Advantages of ECTFE:

- High purity
- Flame resistant
- Impact resistant
- Excellent weatherability
- Low permeability
- UL V-0, FM 4910

Applications Include:

- Semiconductor process equipment
- Chemical storage, fluid handling
- Fire safe componentry

Property	ASTM Test Method	Units	Halar® ECTFE
Physical			
Specific Gravity	D792		1.68
Water Absorption @24 hours	D570	%	<0.10
Mechanical			
Flexural Modulus	D790	psi	245,000
Flexural Strength	D790	psi	6,800
Hardness-Shore D	D2240		D75
Izod Impact Strength–Notched	D256	ft-lb/in	No Break
Tensile Elongation @break @yield	D638 D638	% %	250 5.0
Tensile Modulus	D638	psi	240,000
Tensile Strength @break @yield	D638 D638	psi psi	7,800 4,300
Thermal			
Coefficient of Thermal Expansion	D696	in/in/°F	5.6×10^{-5}
Continuous Use Temperature		°F	300
Flammability Rating	UL94		V-0
Heat Deflection Temperature @66 psi @264 psi	D648 D648	°F °F	194.0 145.0
Limiting Oxygen Index	D2863	%	56
Melt Temperature	D4591	°F	464
Electrical			
Dielectric Constant @1kHz	D150		2.5
Dielectric Strength @1mil	D149	V/mil	2,000
Dissipation Factor @1kHz	D150		0.0016

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.