

Applications

- Tanks, liners
- Valves, seats, gaskets, and seals
- Pump components
- Bearings
- Super-cold refrigeration components

Advantages

- High purity
- Excellent chemical resistance
- Good permeability resistance
- Excellent abrasion
- Low and high temperature capability

Grades

- Unfilled
- Glass filled
- Carbon filled

NOTE: Several grades of this material are available. For additional information regarding this plastic, contact your Emco Industrial Plastics representative or call (800) 292-9906.

ETFE

ETFE, Unfilled

[Ethylene-TetraFluoroEthylene, Unfilled]

Tefzel® ETFE is a fluorocarbon-based polymer manufactured only by DuPont. It was introduced as a material which offered both corrosion resistance and mechanical strength over a wide temperature range.

Tefzel® ETFE (Ethylene TetrafluoroEthylene) was developed as a tough Teflon® with similar hardness compared to nylon, unlike virgin PTFE & FEP. The improvements in stiffness is paid for by reduced chemical resistance and working temperature. ETFE offers high purity, excellent chemical resistance, good permeability resistance, and excellent abrasion resistance over a temperature range of -300°F to +300°F (-185°C to +150°C). Tefzel ® ETFE is available in sheet, rod, and film forms. It is also available in a fabric-backed sheet for construction of dual laminate vessels or the lining of existing chemical vessels.

Brand Names

Tefzel®, Norton®, Chemfluor®

Emco Industrial Plastics doesn't claim to represent all of the manufacturers or trade name products listed. This list is intended as a guide of typical materials available for purchase from Emco Industrial Plastics, Inc. For additional information, contact an Emco Industrial Plastics representative at (800) 292-9906.

Availability

TYPE	SIZE	LENGTH	COLOR
Sheet	0.25" - 0.75" TH	Std. sheet sizes; CTS	Natural
Rod	0.063" - 3" DIA	Std. foot lengths; CTS	Natural
Tube	1/16" - 1/2" OD; wall thickness varies	Std. foot lengths; CTS	White
Film	0.0005" - 0.020" TH	48", 62" roll width	Blue, red

Give us your cut-to-size dimensions. We will precision-cut these plastics to your exact size. Additional sizes and colors available upon request.

Properties

PHYSICAL PROPERTIES	UNITS	ASTM	RESULTS
Density	lb/in ³	D792	
MECHANICAL PROPERTIES	UNITS	ASTM	RESULTS
Tensile Strength @yield	psi	D638	6100
Tensile Elongation @Break	%	D638	300
Flexural Modulus	psi	400000	145000
Compressive Strength	psi	D695	2470
Hardness, Shore D		D785	67
IZOD Impact Strength Notched	ft-lb/in	D256	No Break
THERMAL PROPERTIES	UNITS	ASTM	RESULTS
Coefficient of Linear Thermal Expansion	(x 10 ⁻⁵ in./in./°F)	D256	7.3
Melting Temperature	°F	D3418	311
Flammability Rating		UL94	V-O
ELECTRICAL PROPERTIES	UNITS	ASTM	RESULTS
Dielectric Strength	V/mil	D149	1800
Dielectric Constant		D150	2.5 @1 MHz
Dissipation Factor @ 60 Hz		D150	0.0060 @1 MHz
Volume Resistivity, 50% RH	ohm-cm	D257	1017

NOTE: The property values presented above 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.