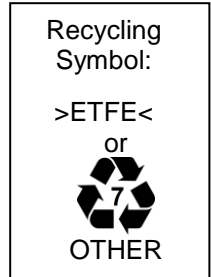


HellermannTyton TYPICAL MATERIAL PROPERTIES	ETFE Injection Molding Grade	SPECIFICATION NUMBER MTS1204CSU			
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DESCRIPTION

ETFE is a copolymer consisting of ethylene and tetrafluoroethylene. This fluoroplastic has excellent electrical, chemical, mechanical, and processing properties. It is well suited for applications requiring high mechanical strength, chemical, thermal, and/or electrical requirements. Designed for thin walled molded product. It has excellent chemical and heat resistance including excellent weatherability capabilities.

Commercial Name: ETFE
Catalog Code: ETFE
Chemical Name: Ethylene Tetrafluoroethylene
Used On: Cable ties



GENERAL PERFORMANCE CHARACTERISTICS

Heat Resistance	Very Good
Impact Resistance	Very Good
Moisture Sensitivity	Low
UV Resistance	Excellent
Flame Spread	Very Low
Smoke Generation	Low
High Heat Sterilization Resistance	Very Good

PERFORMANCE ADDITIVES

Glass	None
Mineral	None
Carbon	None
Halogens	Fluorine is part of base material No chlorine is used

PROCESS ADDITIVES

Fillers	None
Lubricants	None
Shrink Additives	None
Chlorine	None

CONDITIONING None: ETFE absorbs <=0.1% moisture in a 24 hour period

CHEMICAL RESISTANCE


Acids	Excellent
Bases	Excellent
Solvents	Excellent
Gasoline	Excellent
Oil	Excellent
Salt Water	Excellent

MAJOR TOXIC ELEMENTS

Under normal temperature this material is inert. However, when heated to 300°C to 350°C, it may produce harmful vapors, including toxic gases, such as hydrogen fluoride.

APPROVALS

ASTM	D3159
RoHS Compliant	Yes

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PROPERTIES CHART

	Dry	Units	Test Method
FLAMMABILITY			
UL Flammability @ 1.5 mm	V-0		UL 94 *Mfg
PHYSICAL			
Specific Gravity	1.72 - 176	- ⁽¹⁾	ASTM D3159
Melt Flow Rate	8-16	g/10 min	ASTM D3159
MECHANICAL			
Tensile Strength	42-47 (6092-6817)	MPa (psi)	ASTM D3159
Elongation	420-450	%	ASTM D3159
THERMAL			
Continuous Operating Temp	-80 to 150 (-112 to 302)	°C (°F)	*Mfg
UL RTI Str @1.5 mm (0.059 in)			
Elec	180 (356)	°C (°F)	UL 746
Imp	170 (338)		
Str	180 (356)		
Melting Point (DSC)	260-270 (500-518)	°C (°F)	ASTM D3159

⁽¹⁾ Quantity is unit less. Use g/cm³ to convert to other units.

* Raw material vendor test results

This document is intended as a general guide, in the material selection for a product, but does not guarantee satisfactory performance. All materials selected must be thoroughly tested in its intended application to determine its suitability. Consult a HellermannTyton representative for assistance in the final material selection.

The information contained herein is believed to be accurate at the time of printing. However, this information has been obtained from a variety of sources and has not been independently verified by HellermannTyton Corporation; therefore, we cannot warrant fitness for a particular application. Furthermore, HellermannTyton Corporation reserves the right to make changes to this document, at any time, without notice to our customers.