



THV - Tetrafluoroethylene Hexafluoropropylene Vinylidene Fluoride

OVERVIEW

THV is a material that when extruded in various forms, offers the a high degree of flexibility while having the highest degree of optical clarity of any fluoropolymer. Combined with the traditional chemical and environmental resistance of most fluoropolymers, THV is an ideal choice for applications requiring good UV transmittance. THV is easily welds to itself with a variety of methods, and it also can be formed into shapes easily.

THV has a high working temperature and has been used effectively in aerospace markets as a conduit for lighting boards due to its optical clarity. It also has been used for sheathing in fiber optics markets, which also prize its flexibility. Due to its clarity and chemical resistance, when extruded in tubing form, it is ideal for fluid management applications especially in semiconductor manufacturing.



THV extruded tubing coiled and tied with end caps.



FLEXURAL MODULUS



MOISTURE ABSORPTION



CHEMICAL RESISTANCE

APPLICATIONS

- Fluid management tubing
- Housing for LED lighting
- Fiber optic sheathing
- Medical components

PRODUCTS

- Extruded tubing
- Custom profiles
- Multi-Lumens
- Monofilament
- Co-extrusions




KEY PROPERTIES





- High working temperature
302 °F / 150 °C
- Excellent optical clarity
- Exceptional flexibility
- Low moisture absorption
- Chemically resistant to many common solvents





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The information presented in this publication is believed to be accurate and is not intended to constitute a specification. Property characteristics are dramatically impacted by geometry and processing method, thus properties of extruded parts may vary. In some instances, data may not be available for publication and will be notated as "na" where applicable. These tables are meant to serve as a general guideline only. Users should evaluate the material to determine suitability for their own particular application.

ELECTRICAL		ASTM	THV
	Density (g/cc)	ISO 12086	1.93 - 2.06
	Refraction Index	D542	1.35 - 1.36
	Oxygen Index (%)	D2863	> 65

MECHANICAL		ASTM	THV
	Hardness, Shore D	D2240	44 - 59
	Ultimate Tensile Strength (MPa)	ISO 527 (1 or 3)	20 - 29
	Elongation at Break (%)	ISO 527 (1 or 3)	420 - 600
	Flexural Modulus (GPa)	D790	80 - 525

ELECTRICAL		ASTM	THV
	Dielectric Constant 1 MHz	D150	5.72
	Dielectric Strength (V/mil)	D149	1574.8

THERMAL		ASTM	THV
	Melt Temp (°C)	D3418	115 - 225