



## Flametec™ Kyttec® PVDF

(polyvinylidene fluoride), is a fluoropolymer ( the homopolymer of 1,1-difluoroethene), that is a tough engineering thermoplastic with a balance of physical and chemical properties that qualify it for high performance service in a wide range of applications. It is mechanically both strong and tough, exhibiting high dielectric strength, and has a broad useful temperature range. As it is a fluoropolymer, it is highly resistant to most environmental conditions, including corrosive chemicals and ultraviolet and gamma radiation, and is ideally suited for handling wet or dry chlorine, bromine, and other halogens.

### Key Benefits

<b>Weldability</b>	Easy to fabricate and thermoplastically weldable
<b>Strength</b>	Good tensile strength and mechanical abrasion resistance
<b>Purity</b>	An ultra-pure material
<b>Chemical Resistance</b>	Resistance to a broad range of chemistries. Limited resistance to high ph
<b>Fire Safe</b>	Meets FM4910 criteria and is FM listed

<b>Colors</b>	<b>Finish</b>	<b>Thickness</b>	<b>Width</b>	<b>Length</b>
Natural, Opaque	Smooth	1/8"-2"	48"	96" / 120"

Property	Units	Value	ASTM Method
<b>Physical</b>			
Specific Gravity	g/cm <sup>3</sup> (lbs/in <sup>3</sup> )	1.77-1.79 (.064-.065)	D792
Moisture Absorption	%	0.02	D 570
<b>Mechanical</b>			
Hardness	Shore D	76-80	D2240
Tensile Strength@Break @23°C	psi	6000	D 638
Tensile Strength @Yield @23°C	psi	6500	D 638
Elongation @ Break @23°C	%	50-250	D 638
Elongation @Yield @23°C	%	10	D 638
Tensile Modulus @23°C	psi	225,000	D 638
Flexural Strength @23°C	psi	6960-8000	D 790
Flexural Modulus @23°C	psi	250,000	D 790
Izod Impact (Unnotched) @23°C	J/m (ft-lb/in)	80-130 (1.5-2.5)	D 256
Compressive Strength @23°C(min)	Mpa (psi)	61 minimum (8850)	D 695
Coefficient of Friction			
Static	–	0.10-0.25	D 1894
Dynamic	–	0.15-0.25	D 1894
<b>Thermal</b>			
Heat Distortion Temperature @ 66 psi (.46 Mpa)	TMA °C (°F)	125-140 (257-284)	–
@ 264 psi (1.82 Mpa)	°C (°F)	105-115 (221-240)	–
Thermal Conductivity @23°C-130°C	W/mk(BTU/in)/(HR/ft°F)	0.19 - 0.22 (1.3-1.5)	C 177
Coef of Thermal Expansion	°C <sup>-1</sup> (°F <sup>-1</sup> )	10-12x10 <sup>-5</sup> (5.6-6.7x10 <sup>-5</sup> )	D 696
Brittleness Temperature	°C (°F)	-43 (-46)	D 2236
<b>Flammability</b>			
Factory Mutual		4910 Listed	File #3D1Q5.AM
Limiting Oxygen Index	%	43	D 2863