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The **Flametek®** family of Fire Retardant plastics have been specially formulated to provide protection against the spread of fire or flames. All of the materials shown below are listed with **FM Global** (formerly Factory Mutual Insurance Company) as compliant to **FM4910 requirements**. When **FM4910 listed materials** are used for construction in an area, fire suppression systems are not required.

The Cleanroom Materials Flammability Test Protocol (Class 4910) contains the method for conducting tests. Now, wet-bench manufacturers and users can apply the cleanroom protocol to develop plastic materials and equipment capable of resisting fire, emitting little, if any smoke, and producing little, if any, corrosive by-products. Materials passing the cleanroom protocol, subsequently, can be listed in the Approval Guide, a publication of FM Approvals.

GENERAL PROPERTIES	ASTM / UL	KYTEC PVDF	FR-CP-5 PP	FR-CP-7-D PP	CLEANROOM PVC-C
PHYSICAL					
Specific Gravity (g/cm ³)	D792	1.75 - 1.8	0.99	1.38	1.53
Water Absorption, 24 hrs (%)	D570	0.04	<0.01	–	0.03
MECHANICAL					
Tensile Strength at Yield (psi)	D638	7,250 - 8,700	3,500	2,500	7,190
Tensile Modulus (psi)	D638	246,500 - 362,600	–	–	366,000
Flexural Strength (psi)	D790	–	–	–	–
Flexural Modulus (psi)	D790	–	135,000	450,000	–
Compressive Strength (psi)	D695	–	–	–	–
Hardness, Shore D	D2240	73 - 80	65	67	76
IZOD Notched Impact (ft-lb/in)	D256	–	17	10.1	3.0
THERMAL					
Coeff. of Thermal Expansion(x 10 ⁻⁵ in./in./°F)	D696	7.8	6.5	–	3.3
Heat Deflection Temp (°F / °C) @ 66 psi	D648	293 / 145	187 / 86	248 / 120	190 / 88
Heat Deflection Temp (°F / °C) @ 264 psi	D648	230 / 110	–	–	173 / 78
Melting Temperature (°F / °C)	–	–	–	–	–
Max Use Temperature (°F / °C)	–	–	356 / 180	180 / 82	–
ELECTRICAL					
Dielectric Strength (@ 1/8" thick) (V/mil)	D149	–	–	–	–
Dielectric Constant at 1 kHz	D150	–	–	–	–
Dielectric Factor at 1 kHz	D150	–	–	–	–
Arc Resistance (sec)	D495	–	–	–	–
Volume Resistivity (ohm/cm) @ 50% RH	D257	–	–	–	–
FLAMMABILITY					
Factory Mutual	FM4910	Listed	Listed	Listed	Listed
Vertical Burn Test	UL-94	V-0	V-0	–	5-VA / V-0
Flame Spread Index	FM4910	–	–	–	–

NOTE: The information contained here in is typical values intended for reference only. They should NOT be used as a basis for design specifications or quality control.