



# TECHNICAL DATA SHEET

## PVC

(POLYVINYL CHLORIDE)

PVC is the most widely used member of the vinyl family. It is most commonly used in tubing, pipe and fittings. PVC offers excellent corrosion and weather resistance. It has a high strength-to-weight ratio and is a good electrical and thermal insulator. PVC is also self-extinguishing per UL flammability tests. PVC may be used to temperatures of 140°F (60°C) and is easily bonded, welded, machined, bent and shaped.

<b>TYPICAL PROPERTIES of PVC and CPVC</b>			
<b>ASTM or UL test</b>	<b>Property</b>	<b>PVC</b>	<b>CPVC</b>
<b>PHYSICAL</b>			
D792	Density (lb/in <sup>3</sup> ) (g/cm <sup>3</sup> )	0.051 1.41	0.055 1.52
D570	Water Absorption, 24 hrs (%)	0	0.04
<b>MECHANICAL</b>			
D638	Tensile Strength (psi)	7,500	8,200
D638	Tensile Modulus (psi)	411,000	430,000
D638	Tensile Elongation at Break (%)	-	27
D790	Flexural Strength (psi)	12,800	15,000
D790	Flexural Modulus (psi)	481,000	410,000
D785	Hardness	115 (Rockwell R)	121 (Rockwell R)
D256	IZOD Notched Impact (ft-lb/in)	1.0	1.6
<b>THERMAL</b>			
D696	Coefficient of Linear Thermal Expansion (x 10 <sup>-5</sup> in./in./°F)	6.1	3.7
D648	Heat Deflection Temp (°F / °C) at 264 psi	176 / 80	217 / 103
D3418	Melting Temp (°F / °C)	n.a.	n.a.
-	Max Operating Temp (°F / °C)	140 / 60	200 / 93
C177	Thermal Conductivity (BTU-in/ft <sup>2</sup> -hr-°F) (x 10 <sup>-4</sup> cal/cm-sec-°C)	0.90 3.1	0.95 3.3
UL94	Flammability Rating	V-0	V-0
<b>ELECTRICAL</b>			
D149	Dielectric Strength (V/mil) short time, 1/8" thick	544	1250
D150	Dielectric Constant at 60 Hz	3.2	3.7
D150	Dissipation Factor at 60 Hz	.0096	-
D257	Volume Resistivity (ohm-cm)at 50% RH	5.4 x 10 <sup>15</sup>	3.4 x 10 <sup>15</sup>

### Benefits

- Chemical stability
- Clarity / transparency
- Flexible or rigid
- Biocompatibility
- High strength
- Economical
- Dimensional stability
- Good weather resistance
- High impact strength

### Applications

- Medical and food grade tubing
- Filters
- Tanks
- Pipes
- Valves
- Bushings
- Fittings
- Laboratory equipment
- Ducts
- Wall coverings

### SHAPES AVAILABLE



NOTE: The information contained herein 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.