

PVC (Polyvinyl Chloride)

PVC is a normal impact, high corrosion resistant polyvinyl chloride. Because of its exceptional corrosion resistance, it is ideally suited for applications where maximum chemical resistance is necessary. Its high strength-to-weight ratio, cost efficiency, ease of fabrication and economic balance make it the material of choice.

PVC conforms to ASTM D-1784-95 Class 12454-B (Formerly Type I Grade 1) and is manufactured without the use of plasticizers or fillers. It can be used in self-supporting construction up to 140° F (depending on chemistry). It exhibits excellent fire ratings (UL-94V-0) and has a flame spread under 20 per ASTM-E-84.

- *Strength* – PVC combines tensile strength and stiffness for the toughest applications.
- *Chemical Resistance* – PVC is resistant to most acids and alkali solutions.
- *Workability* – PVC can be machined, cut, welded and glued for fabrication versatility.
- *Low Cost* – PVC is an economical choice for fabricating equipment, tanks, pumps etc.
- *Consistency* – PVC is extruded through most of the available gauges for dimensional consistency.
- *Flammability* – PVC is self-extinguishing.

Property	ASTM Test Method	Units	PVC
Physical			
Density	D 792	g/cc	1.42
Water Absorption	D 570	%	0.06
Cell Class	1784		12454-B
Rockwell Hardness	D 785	R Scale	115
Shore Durometer	D 2240	D	89
Mechanical			
Tensile Modulus	D 638	psi	411,000
Yield Strength	D 638	psi	7,500
Flexural Modulus	D 790	psi	481,000
Yield Strength	D 790	psi	12,800
Izod Impact	D 256	ft-lb/in	1.0
Thermal			
Vicatte Softening Point	D 1525	°F	181
Heat Deflection Temperature	D 648	°F	179
Linear Coefficient of Expansion		in/in/°F	3.2×10^{-5}
Flammability	D 635	—	Self-Extinguishing
Flammability	UL 94	—	V-0
Flame Spread	E 84	—	15
Electrical			
Volume Resistivity	D 257	ohm/cm	5.4×10^{15}
Dielectric Constant	D 150	60 Hz	3.19
Dissipation Factor	D 150	60 Hz	0.0096
Loss Index	D 150	60 Hz	0.030
Dielectric Strength	D 149	V/mil	544
Chemical			
Chemical Resistance	D 1784	—	Class B

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.