

TYPICAL PROPERTIES OF POLYVINYL CHLORIDE (PVC)

ASTM Test	Property	Rigid	Flexible	Foam
PHYSICAL				
D792	Specific gravity	1.30-1.58	1.20-1.70	0.45-0.8
D792	Specific volume (in ³ /lb)	19.1-20.5	—	
D570	Water absorption , 24 h, 1/8-in thk (%)	0.04-0.4	0.15-0.75	0.03-0.04
MECHANICAL				
D638	Tensile strength (psi)	6,000-8,000	1,500-3,500	2000-3000
D638	Elongation (%)	50-150	200-450	
D638	Tensile modulus (10 ⁵ psi)	3.5-10	—	1-2.4
D790	Flexural modulus (10 ⁵ psi)	3-8	—	
D256	Impact strength , Izod (ft-lb/in of notch)	0.4-20.0	—	0.4-0.6
D785	Hardness , Shore	D65-85	A50-100	4-9
D256	Charpy Impact unnotched			0.4-0.6
THERMAL				
C177	Thermal conductivity (10 ⁻⁴ cal-cm/sec-cm ² -°C)	3.5-5.0	3.0-4.0	0.05-3
D696	Coefficient of thermal expansion (10 ⁻⁵ in/in-°F)	1.2-5.6	3.9-13.9	3-4.5
D648	Deflection temperature (°F) At 264 psi 140-170 At 66 psi 135-180	— —		145-150
UL 94	Flammability rating	V-0 (Cell Class 12454-B)	—	VO-SV
E 84	Flame spread			15-25
ELECTRICAL				
D149	Dielectric strength (V/mil) Short time, 1/8-in thk	350-500	300-400	
D150	Dielectric constant At 1 kHz 3.0-3.8	4.0-8.0		
D150	Dissipation factor At 1 kHz 0.009-0.017	0.07-0.16		
D257	Volume resistivity (ohm-cm) At 73°F, 50% RH	>10 ¹⁶	10 ¹¹ -10 ¹⁵	
D495	Arc resistance (s)	60-80	—	