



## PVC Type I

### Polyvinyl Chloride, Type I, Grade 1

Physical Properties	Metric	English	Comments
Specific Gravity	1.4 g/cc	0.0506 lb/in <sup>3</sup>	ASTM D792
Water Absorption	Max 0.04 %	Max 0.04 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	Max 0.04 %	Max 0.04 %	Immersion; ASTM D570(2)

#### Mechanical Properties

Hardness, Shore D	89	89	ASTM D2240
Tensile Strength, Ultimate	57.6 MPa	8350 psi	ASTM D638
Elongation at Break	5 %	5 %	ASTM D638
Tensile Modulus	3.21 GPa	465 ksi	ASTM D638
Flexural Modulus	2.74 GPa	398 ksi	ASTM D790
Flexural Yield Strength	57.6 MPa	8350 psi	ASTM D790
Compressive Strength	82.7 MPa	12000 psi	10% Def., 73°F; ASTM D695
Compressive Modulus	2.41 GPa	350 ksi	ASTM D695
Izod Impact, Notched	0.214 J/cm	0.4 ft-lb/in	ASTM D256 Type A

#### Electrical Properties

Surface Resistivity per Square	Min 1e+012 ohm	Min 1e+012 ohm	ASTM D257
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#### Thermal Properties

Maximum Service Temperature, Air	60 °C	140 °F	Long Term
Flammability, UL94 (Estimated Rating)	V-0	V-0	1/8 inch

#### Qualitative Processing Properties

Compliance - FDA	Non-Compliant	
Machinability	6	1-10, 1=Easier to Machine
Service in Alcohols	Acceptable Service	
Service in Aliphatic Hydrocarbons	Limited Service	
Service in Aromatic Hydrocarbons	Limited Service	
Service in Chlorinated Solvents	Limited Service	
Service in Ethers	Unacceptable	
Service in Ketones	Unacceptable	
Service in Strong Acids	Limited Service	
Service in Strong Alkalies	Acceptable Service	
Service in Sunlight	Limited Service	
Service in Weak Acids	Acceptable Service	
Service in Weak Alkalies	Acceptable Service	

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