

# Type I PVC Product Data



## ► Typical Physical Properties

Property	Method*	Conditions	Units	Value
Density	D-1505		lb/ft <sup>3</sup>	87
Heat deflection temperature (H.D.T)	D-648	Load: 264 psi	°F	150 - 155
Service Temperature			°F	14 to 122
Thermal conductivity	C-177		Btu-in./hr-ft <sup>2</sup> -°F	1.05
Coefficient of linear thermal expansion	D-696		10 <sup>-5</sup> /°F	3.7
Rockwell hardness	D-785		R Scale	97
Tensile strength at yield	D-638	0.4 in./min	PSI	7,500
Tensile strength at break	D-638	0.4 in./min	PSI	5,800
Elongation at yield	D-638	0.4 in./min	%	3
Elongation at break	D-638	0.4 in./min	%	75
Tensile modulus of elasticity	D-638	0.04 in./min	PSI	420,000
Flexural strength	D-790	0.04 in./min	PSI	11,600
Flexural modulus	D-790	0.04 in./min	PSI	440,000
Impact falling weight	ISO 6603/1	0.118. sheet	ft-lbf	70

\*ASTM except where noted otherwise

## ► Flammability

Type 1 PVC is self-extinguishing and complies with the most demanding international fire resistance standards defined in the field of plastics, as shown in the table at right.

Standard	Classification*
DIN 4102	B-1
BS 476/7	Class 1
NSP 92501,5	M-1
CSE RF 3/77	Class 1
UL 94	V-0
ASTM D-635	SE

\* Depends on thickness

## ► Fabrication Tips

Type 1 PVC can be easily fabricated using various techniques. Below are general recommendations for some of them.

Sawing	Machining	Thermoforming	Drilling	Bonding	Welding
For both band and circular saws use blades with a minimum tooth set, and about 8 to 10 teeth per inch. Prevent overheating by feeding slowly.	Use low machining speeds for turning and shaping, and assure free removal of machining chips.	Between 130°C and 170°C Type 1 PVC sheets become formable and can then be formed, press molded or blow formed.	Use conventional drills, but be certain to remove free drill chips in order to avoid overheating of the sheet. Also, use slow rate of penetration.	Type 1 PVC sheets can be bonded with conventional solvent based PVC adhesives.	Type 1 PVC extruded PVC sheets can be welded by hot-air welding process conventionally used for PVC.

## ► UV Protection

Type 1 PVC is manufactured with UV stabilization intended for general purpose and thermoforming applications. White Type 1 PVC features increased UV resistance for exterior use.

## ► Chemicals Resistance

<b>EXCELLENT</b>	Mineral acids, alkalis, plating solutions, paper making chemicals, pickling solutions, other inorganic solutions and fumes thereof.
<b>GOOD</b>	Alcohols, aliphatic hydrocarbons, glycols, amines, phenols.
<b>Not Recommended for Contact</b>	Ketones, chlorinated solvents, aromatic hydrocarbons, some esters and ethers.