

# CHLORINATED POLYVINYL CHLORIDE (CPVC)

## KEY FEATURES

- Excellent Corrosion Resistance at Elevated Temperatures
- Easy to Machine
- Great Fire Resistance
- Good Chemical Resistance

## DESCRIPTION

Chlorinated Polyvinyl Chloride is readily workable, including machining, welding, and forming. Because of its excellent corrosion resistance at elevated temperatures, CPVC is ideally suited for self-supporting constructions where temperatures up to 200°F (93°C) are present. The ability to bend, shape, and weld CPVC enables its use in a wide variety of process applications including tanks, scrubbers, and ventilation systems. It exhibits excellent fire resistance, chemical resistance, and is readily available in sheets, rods, and tubing.

## TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
<b>Physical</b>	Chemical Designation			CPVC	
	Filler				
	Density		g/cm <sup>3</sup>	1.52	D792
<b>Mechanical</b>	Tensile Modulus	@ 73 °F	PSI	430,000	D638
	Tensile Strength @ Yld	@ 73 °F	PSI	8,200	D638
	Elongation @ Brk	@ 73 °F	%	27	D638
	Flexural Modulus	@ 73 °F	PSI	410,000	D790
	Flexural Strength	@ 73 °F	PSI	15,000	D790
	Compressive Modulus	@ 73 °F	PSI	350,000	D695
	Compressive Strength	@ 73 °F, 10% strain	PSI	14,000	D695
	Izod (charpy) Impact Strength	@ 73 °F	ft-lbs/in	1.6	D256
	Rockwell Hardness	@ 73 °F	R Scale	121	D785
	Coefficient of Friction	Static			
	Coefficient of Friction	Dynamic, 40PSI, 50 FPM			

### TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
<b>Thermal</b>	Vicat Softening Point		°F		
	Melting Temperature		°F	n/a	
	Heat Deflection Temperature	@ 66	°F		
	Heat Deflection Temperature	@ 264	°F	217	D648
	Max Operating Temperature	Intermittent	°F	200	
	Service Temperature	Long Term	°F		
	Thermal Expansion (CLTE)		in/in/°F	3.7x10 <sup>-5</sup>	D696
	Specific Heat		BTU/lb-°F		
	Thermal Conductivity		BTU-in/hr-ft <sup>2</sup> -°F	0.95	C177
<b>Electrical</b>	Surface Resistivity		ohms/square	>=1.00e+12ohms	D257
	Volume Resistivity	@ 73 °F, 50% RH	ohm-cm	3.4x10 <sup>15</sup>	D257
	Dielectric Strength		V/mil	1250	D149
	Dielectric Constant	@60Hz		3.7	D150
	Dissipation Factor	@ 1 kHz .009-.017			
<b>Other</b>	Moisture Absorption	@ 24 hrs, 73 °F	%	0.04	D570
	Moisture Absorption	@ Saturation, 73 °F	%		
	Flammability	UL 94		V-O	UL94
	Food Grade			N	
	Relative Cost				

\*The data stated above are typical values intended for reference and comparison purposes only.

\*The data should not be used as a basis for design specifications or quality control.

\*The information is provided as a guide to the best of our knowledge and given without obligation or liability.

\*Testing under individual application circumstances is recommended.