

Productivity

PVC/CPVC: Mechanical Plastic Materials with Excellent Chemical Resistance

Issue: Chemicals corrode pump and valve components.

Application: PVC and CPVC pump and valve components resist corrosion from the harsh chemicals used in the normal process.

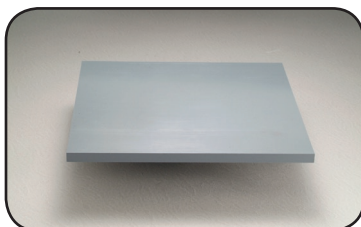
Recommendation: PVC and CPVC pump and valve components resist corrosion and require far less repair and maintenance. CPVC performs under higher temperatures than PVC.

PVC (Type I)

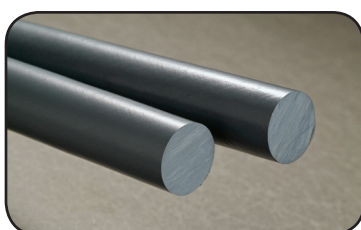


SKU# 1YYF9

CPVC



SKU# 1YZE7



SKU# 1YZK1

Product Features & Benefits:

PVC (Polyvinyl Chloride) Type I is a normal impact, high corrosion resistant material. Because of its exceptional corrosion resistance, it is ideally suited for applications where maximum chemical resistance is necessary. PVC can be used in applications ranging in temperature from +5 °F to + 40 °F. CPVC (Chlorinated Polyvinyl Chloride) maintains its mechanical properties at higher temperatures of +200 °F.

PVC/CPVC Benefits:

- Excellent chemical resistance
- Excellent tensile strength and stiffness
- Easy to work with, can be machined, cut, welded and glued
- PVC and CPVC is self-extinguishing
- Low water absorption

Common Applications:

- Pumps
- Valves
- Seals
- Pipe systems
- Bearings
- Chemical tanks

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Chemical Resistance

		PVC	CPVC	PP	PE	ABS
	Conc. (%)	Room Temperature				
Acetic Acid	100	+	-	+	+	-
Acetone	100	-	-	+	+	-
Ammonia	conc.	+	x	+	+	+
Ammonium Chloride		+	+	+	+	+
Bleaching Solution	12.5 Cl	+	+	0	0	x
Boric Acid	100	+	+	+	+	x
Brake Fluid		+	x	+	+	-
Calcium Chloride		+	+	+	+	+
Chlorine, gas	100	0	x	-	0	-
Chloroform		-	-	0	0/-	-
Citric Acid	10	+	-	+	+	+
Diesel Fuel		+	x	+	+	+
Ethyl Alcohol	96	-	x	+	+	-
Food Oil		+	x	+	+	+
Formaldehyde, AQU	40	+	x	+	+	+
Frost Protection Agent		+	x	+	+	+
Fuel, Aromatic Free		+	x	+	+	+/0
Glycerin	100	+	+	+	+	+
Glycol	100	0	x	+	+	+
Hydrochloric Acid	10	+	+	+	+	+
Hydrochloric Acid	conc.	+	x	+	+	+
Hydrogen Peroxide	10	+	+	+	+	+
Isopropyl Alcohol	100	0	0	+	+	0
Methyl Alcohol	100	+	x	+	+	-
Mineral Oils, Aromatic Free		+	+	+	+	+
Nitric Acid	10	+	+	+	+	+
Nitric Acid	50	+	+	-	0	+/0
Ozone, Gas	<0.5 ppm	+	x	-	+/0	+
Petroleum, Aromatic Free	100	+	x	x	x	0
Phosphoric Acid	50	+	+	+	+	+
Premium Fuel		-	x	+	+	-
Propyl Alcohol		+	x	+	+	+
Silicone Oil		+	+	+	+	+
Sodium Chloride, AQU		+	+	+	+	+
Sodium Nitrate, AQU		+	+	+	+	+
Sulphuric Acid	96	+	+	0/-	0	-
Water		+	+	+	+	+

AVAILABLE SIZES:

Rod: 1/4" to 4" and 12" diameter, 1' to 8' lengths

Sheet: 1/16" to 3" thick,
12" to 48" widths,
12" to 96" lengths

COLORS:

Sheet: Dark Gray
Rod: Dark Gray

+ = resistant 0 = restricted resistant - = non-resistant
x = no data

Since almost any material is subject to aging, there is a limited life expectancy. The following factors have influence on chemical stability: temperature, duration, concentration, tension level of the part and mechanical strength. From the data of the list, the chemical stability and suitability of a material cannot be judged without the above mentioned restrictions. In special applications, it is up to the user to determine the suitability of the plastic by running trials in real time.

PVC=Polyvinyl Chloride (Type I)
CPVC=Chlorinated Polyvinyl Chloride
PP=Polypropylene
PE=High Density Polyethylene and Low Density Polyethylene
ABS=Acrylonitrile Butadiene Styrene