

Corrosion Resistant Plastics

	CPVC	L.D. POLY ETHYLENE	H.D. POLY ETHYLENE	POLYPRO PYLENE	PVC
PHYSICAL					
SPECIFIC GRAVITY	1.55	0.917 - .932	0.952 - .965	0.90 - .91	1.30 - 1.58
WATER ABSORPTION, 24 hr. (%)	0.05	<0.01	<0.01	0.01 - 0.03	0.04
MECHANICAL					
TENSILE					
Strength, Yield (10 ³ psi) @ 73°F.	8.4	1.3 - 2.1	3.8 - 4.8	4.5 - 5.4	7.8
Elongation, Ultimate (%) @ 73°F.	4.5 - 65.0	100 - 650	10 - 1200	100 - 600	150
Modulus, Yield (10 ³ psi) @ 73°F.	425	25 - 41	155 - 158	165 - 225	506
FLEXURAL					
Strength, (10 ³ psi) @ 73°F.	15.6			6.0 - 8.0	14.7
Modulus, Yield (10 ³ psi) @ 73°F.	474	35 - 48	145 - 225	170 - 250	518
COMPRESSIVE STRENGTH					
2% Offset, (10 ³ psi)					11.1
IMPACT STRENGTH					
Izod, Notched (ft.-lb./in.) @ 73°F.	1.0 - 5.6	No Break	0.5 - 20.0	0.4 - 1.2	1.3
HARDNESS					
COEFFICIENT OF STATIC FRICTION	R118	D44-50	D66-73	R80-102	R113
Against self					
Against steel					
THERMAL					
CONDUCTIVITY					
(BTU/Hr/Sq.Ft./Degree F./in.)	.95				1.2
COEFFICIENT OF THERM. EXPANSION					
(10 ⁻⁵ /Degree F.)					
SPECIFIC HEAT					
(BTU/lb./Degree F.)					
HEAT DEFLECTION TEMP.					
(Degree F.)					
At 66 psi	238	100 - 121	175 - 196	225 - 250	165
At 264 psi	221	90 - 105		120 - 140	156
MAX. CONTINUOUS TEMP. (F.°)					
ELECTRICAL					
VOLUME RESISTIVITY					
(Ohm/cm)	10 ¹⁵	>10 ¹⁶	10 ¹⁶		2.3 X 10 ¹⁶
DIELECTRIC STRENGTH					
(V/Mil)	1220 - 1500	450 - 1000	450 - 500	600	410
DIELECTRIC CONSTANT					
At 60 HZ	3.08	2.25 - 2.35	2.25 - 2.35	2.2 - 2.6	3.2 - 4.0
At 1 MHZ	3.2 - 3.6	2.25 - 2.35	2.25 - 2.35	2.2 - 2.6	2.8 - 3.1
DISSIPATION FACTOR					
At 60 HZ	0.018 - 0.02	<0.0005	<0.0005	<0.0005	0.007 - 0.020
At 1 MHZ	0.020	<0.0005	<0.0005	<0.0005	0.006 - 0.019
ARC RESISTANCE (SECONDS)					
		135 - 160		136 - 185	60 - 80

