*3" & 4" Fittings are suitable for Sch. 40 & 80 pipes as per ASTM F441specification

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Ori-Plast® CPVC

PREMIUM PIPES & FITTINGS FOR HOT & COLD WATER APPLICATIONS

International Grade **CPVC** • Corrosion Free • Fire Resistant • Lifetime Warranty

Made From Japanese Technology

Easy snap-on, quick fix premium high pressure plumbing system

Ori-Plast CPVC pipes are ideal solutions for hot and cold water plumbing applications

CPVC is the abbreviated form of chlorinated poly vinyl chloride, an amorphous (non-crystalline) thermoplastic material produced by post-chlorination of PVC i.e. replacing a portion of hydrogen by chlorine. The transformed material is characterised by higher temperature resistance than PVC as well as higher tensile strength, toughness and an exceptional chemical resistance. These unique properties have made CPVC an ideal piping material for hot and cold water applications for housing (both residential and commercial) and industry.

Short term properties of CPVC compound (CPVC 4120 - 23447 B) as per ASTM D 2846 & D 1784

Property	Value
Impact Strength (Izod)	80.1 J/m of Notch
Tensile Strength	48.3 MPa
Modulus of Elasticity	2482.0 MPa
Deflection Temperature under load (1.82 MPa)	100°C

Dimension chart of Ori-Plast CPVC pipes as per IS 15778:2007 (All dimensions are in 'mm')

Nominal Diameter	Mean Outside Diameter		Class - 1 SDR 11		Class - 2 SDR 13.5	
	Min	Max	Min	Max	Min	Max
15	15.80	16.00	1.70	2.20	1.40	1.90
20	22.10	22.30	2.00	2.50	1.70	2.20
25	28.50	28.70	2.60	3.10	2.10	2.60
32	34.80	35.00	3.20	3.70	2.60	3.10
40	41.20	41.40	3.80	4.30	3.10	3.60
50	53.90	54.10	4.90	5.50	4.00	4.60
Working Pressure in Mpa	27°C		2.76		2.18	
	82°C		0.68		0.55	

Temperature correction / derating

Operating Temperature		CPVC 4120
°F	°C	
70	21	1.00
80	27	1.00
90	32	0.91
100	38	0.82
110	43	0.77
115	46	0.74
120	49	0.65
125	52	0.64
130	54	0.62
140	60	0.50
150	66	0.47
160	71	0.40
170	77	0.32
180	82	0.25
200	93	0.20

Note:

1. The minimum wall thickness of 15mm pipes are not a function of SDR which is the ratio of minimum outside diameter to wall thickness.
2. The Class – 1(SDR 11) pipes of this chart are similar to that of pipes as per ASTM D 2846 and are commonly marketed as per this standard.
3. CPVC 4120 is the recommended grade of material in ASTM D 1784 & 2846 having a Hydrostatic Design stress of 14 MPa (or 2000 psi).
4. To obtain working pressure at temperatures between the ranges mentioned above, the values at 23°C should be multiplied by the respective correcting or derating factor. For example, the working pressure at 60°C for 50mm x Class -2(or SDR 13.5)pipe will be (2.18 MPa x 0.5) or 1.09 MPa or 10.9 kg/cm².

Dimension chart of Ori-Plast CPVC pipes as per ASTM F 441/F 441M(All dimensions are in 'mm')

Nominal Diameter	Mean Outside Diameter		Schedule 40		Schedule 80	
	Min	Max	Min	Max	Min	Max
15	21.20	21.40	2.77	3.28	3.73	4.24
20	26.60	26.80	2.87	3.38	3.91	4.42
25	33.27	33.53	3.38	3.89	4.55	5.08
32	42.07	42.33	3.56	4.07	4.85	5.43
40	48.15	48.45	3.68	4.19	5.08	5.69
50	60.15	60.45	3.91	4.42	5.54	6.20
65	78.82	73.18	5.16	5.77	7.01	7.85
80	88.70	89.10	5.49	6.15	7.62	8.53
90	101.40	101.80	5.74	6.42	8.08	9.04
100	114.07	114.53	6.02	6.73	8.56	9.58
125	141.05	141.55	6.55	7.34	9.52	10.66
150	168.02	168.58	7.11	7.97	10.97	12.29

Working Pressure in Mpa

Nominal Diameter	Schedule 40		Schedule 80	
	23°C	82°C	23°C	82°C
15	4.14	1.03	5.86	1.45
20	3.31	0.83	4.76	1.17
25	3.10	0.76	4.34	1.07
32	2.55	0.62	3.59	0.90
40	2.28	0.55	3.24	0.79
50	1.93	0.48	2.76	0.79
65	2.07	0.52	2.90	0.72
80	1.79	0.45	2.55	0.62
90	1.65	0.41	2.41	0.59
100	1.52	0.38	2.21	0.55
125	1.31	0.31	2.00	0.48
150	1.24	0.31	1.93	0.48

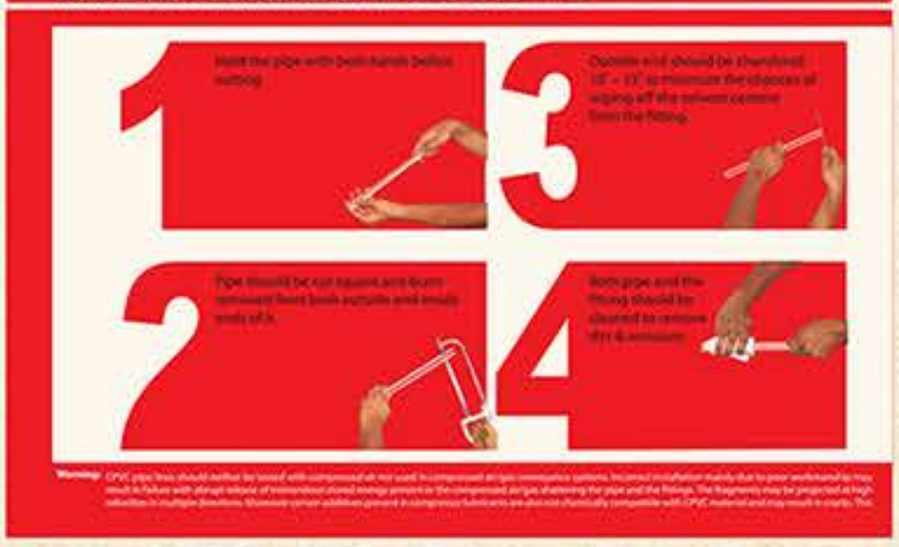
Advantages

- Very good mechanical characteristics also at higher temperatures.
- Outstanding chemical resistance.
- No support of microbial growth.
- Smooth inner surface.
- Exceptional flammability resistance.
- Long service life, even under intense corrosive conditions.
- No electrochemical corrosion.
- Simple installation using solvent cement.
- Very low thermal conductivity.
- No influence on drinking water.

Areas of application

- Residential Building: For indoor & outdoor applications in both hot and cold water systems in place of metal pipes e.g. GI & Copper.
- Commercial Buildings: For low maintenance water supply piping systems.
- Hospitals & Hotels: For ensuring continuous and uninterrupted round the clock supply of hot & cold water.
- Industrial Units: For use in chemical plants including Fire Fighting systems through sprinklers.

INSTALLATION GUIDELINES OF Ori-Plast CPVC PIPES



Warning: CPVC pipe lines should neither be tested with compressed air nor used in compressed air/gas conveyance systems. Incorrect installation mainly due to poor workmanship may result in failure with abrupt release of tremendous stored energy present in the compressed air/gas of entering the pipe and the fittings. The fragments may be projected at high velocities in multiple directions, thereby causing additional personal & consequential hazards. Lubricants are also not chemically compatible with CPVC material and may result in cracks. This will further increase the potential for additional failure. Warranty of Ori-Plast's CPVC pipes and fittings will automatically cease if used in compressed air or gas systems or pipelines tested with compressed air. Ori-Plast cannot be held responsible for any damage or injuries whatsoever arising out of this situation.