



## STANDS STRONG. LASTS LONG.

Pressure-resistant pipes for  
Agricultural Piping Systems.



**PIPES**  
As per IS:4985

**FITTINGS**  
As per IS:7834

### PRODUCT RANGE

Pipes: 20mm to 400mm

Fittings: 20mm to 250mm

Fabricated fittings: 20mm to 315mm



EXTENSIVELY USED IN



AGRICULTURE

## APPLICATIONS

### IN AGRICULTURE

- Water supply and distribution schemes.
- Irrigation.

### OTHERS

- Drinking Water supply and distribution.
- Cable ducting.
- Ventilation pipe line.
- Slurry lines.

## MAJOR ADVANTAGES

- Lightweight, easy to transport, store, handle and install.
- Smooth bore ensures higher flow compared to G.I. pipes & fittings of the same size. No clogging. Saves operational cost.
- Quick to install, Solvent cement based jointing system.
- Corrosion resistance - uPVC is rustproof material, therefore bore diameter remains constant, ensuring constant flow over its lifetime.
- Long working life (if operated under normal/ recommended conditions).
- Cost effective. Added value for your money.

## JOINTING METHOD

- Solvent Joint
- Threaded Joint

### NOTE:

1. Pressure rating of uPVC Pipes & Fittings is temperature related. Derating factor shall be applied during designing & operation for higher temperature applications. (For detailed data refer IS-4985 or contact us).
2. Installation of uPVC pipeline shall be done in accordance with IS-7634 (Part-3).

## SPECIFICATIONS

Specifications	Fittings	Pipes
Material	Unplasticized Polyvinyl Chloride (uPVC)	Unplasticized Polyvinyl Chloride (uPVC)
Colour	Dark Grey	Light Grey
Reference Standards	IS 7834 : 1987	IS 4985 : 2000
Working Temperature of Fluids	Up to 60° C - Continuous	Up to 60° C - Continuous
	Up to 90° C - Short time	Up to 90° C - Short time
	Up to 3 mins	Up to 3 mins
Working Pressure (kg/cm <sup>2</sup> )	4, 6, 10 & 16	2.5, 4, 6, 8, 10 & 12.5
End Connections	Solvent sockets, Threads (For transition fittings)	Solvent sockets

**NOTE:** Note: ISI & Non-ISI pipes & fittings are available.

## PROPERTIES OF uPVC PIPES

### MECHANICAL

Tensile Strength	415 - 525 kg/cm <sup>2</sup>
Compression Strength	550 - 910 kg/cm <sup>2</sup>
Flexural Strength	680 - 1100 kg/cm <sup>2</sup>
Izod Impact Strength	4 - 5 kg/cm <sup>2</sup>
Shore Hardness	D 65 - 85

### THERMAL

Coefficient of Linear Expansion	0.08 mm/M°C
Vicat Softening Temperature	>78°C
Max. Operating Temperature	60°C

### PHYSICAL

Water Absorption	<4mg/cm <sup>3</sup>
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## STANDARDS, QUALITY CONTROL & TESTING

Manufacturing & testing is done in accordance with IS: 4985 - 2000.

All the above pipes, except non-pressure pipes, are tested for potable water supplies in accordance with their relevant standards and as per the test methods given in IS: 12235.

### HAZEN - WILLIAM'S FLOW COEFFICIENT COMPARISON

Pipe Material	PVC	A.C.	G.I.	C.I.
Flow Coefficient	150	130	110	100

Agricultural Pipes are manufactured in accordance with IS:4985 covering a complete range from 20mm to 400mm. They are available in pressure ratings of 2.5 kg/cm<sup>2</sup>, 4 kg/cm<sup>2</sup>, 6 kg/cm<sup>2</sup>, 8 kg/cm<sup>2</sup>, 10 kg/cm<sup>2</sup> & 12.5 kg/cm<sup>2</sup> as defined in IS:4985. These pipes are provided with plain socket and are suitable for solvent cement jointing.

Their main application is in agriculture - For water supply, drip-irrigation & sprinkler lines as well as for drinking water distribution.

However, these can also be used in cable ducting, ventilation pipelines, slurry lines etc.

They are available in light grey colour and a nominal length of 6 meters.

## PIPE DIMENSIONS

(All dimensions are in mm)

Nominal Outside Diameter (Nominal Size) (in mm)	Mean Outside Diameter (in mm)		Outside Diameter at any point (in mm)		Wall Thickness												Mean Socket Internal Diameter of Mid Point of Socket Length	
					Class 1 0.25 MPa 2.5 Kg/cm <sup>2</sup>		Class 2 0.40 MPa 4.0 Kg/cm <sup>2</sup>		Class 3 0.60 MPa 6.0 Kg/cm <sup>2</sup>		Class 4 0.80 MPa 8.0 Kg/cm <sup>2</sup>		Class 5 1.00 MPa 10.0 Kg/cm <sup>2</sup>		Class 6 1.25 MPa 12.5 Kg/cm <sup>2</sup>			
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
20	20.0	20.3	19.5	20.5	-	-	-	-	-	-	-	-	1.1	1.5	1.4	1.8	20.1	20.3
25	25.0	25.0	24.5	25.5	-	-	-	-	-	-	1.2	1.6	1.4	1.8	1.7	2.1	25.1	25.3
32	32.0	32.3	31.5	32.5	-	-	-	-	-	-	1.5	1.9	1.8	2.2	2.2	2.7	32.1	32.3
40	40.0	40.3	39.5	40.5	-	-	-	-	1.4	1.8	1.8	2.2	2.2	2.7	2.8	3.3	40.1	40.3
50	50.0	50.3	49.4	50.6	-	-	-	-	1.7	2.1	2.3	2.8	2.8	3.3	3.4	4.0	50.1	50.3
63	63.0	63.3	62.2	63.8	-	-	1.5	1.9	2.2	2.7	2.8	3.3	3.5	4.1	4.3	5.0	63.1	63.3
75	75.0	75.3	74.1	75.9	-	-	1.8	2.2	2.6	3.1	3.4	4.0	4.2	4.9	5.1	5.9	75.1	75.3
90	90.0	90.3	88.9	91.1	1.3	1.7	2.1	2.6	3.1	3.7	4.0	4.6	5.0	5.7	6.1	7.1	90.1	90.3
110	110.0	110.4	108.6	111.4	1.6	2.0	2.5	3.0	3.7	4.3	4.9	5.6	6.1	7.1	7.5	8.7	110.1	110.4
125	125.0	125.4	123.5	126.5	1.8	2.2	2.9	3.4	4.3	5.0	5.6	6.4	6.9	8.0	8.5	9.8	125.1	125.4
140	140.0	140.5	138.3	141.7	2.0	2.4	3.2	3.8	4.8	5.5	6.3	7.3	7.7	8.9	9.5	11.0	140.2	140.5
160	160.0	160.5	158.0	162.0	2.3	2.8	3.7	4.3	5.4	6.2	7.2	8.3	8.8	10.2	10.9	12.6	160.2	160.5
180	180.0	180.6	177.8	182.2	2.6	3.1	4.2	4.9	6.1	7.1	8.0	9.2	9.9	11.4	12.2	14.1	180.2	180.5
200	200.0	200.6	197.6	202.4	2.9	3.4	4.6	5.3	6.8	7.9	8.9	10.3	11.0	12.7	13.6	15.7	200.3	200.6
225	225.0	225.7	222.3	227.7	3.3	3.9	5.2	6.0	7.6	8.8	10.0	11.5	12.4	14.3	15.3	17.6	225.3	225.7
250	250.0	250.8	247.0	253.0	3.6	4.2	5.7	6.5	8.5	9.8	11.2	12.9	13.8	15.9	17.0	19.6	250.4	250.8
280	280.0	280.9	276.6	283.4	4.1	4.8	6.4	7.4	9.5	11.0	12.5	14.4	15.4	17.8	19.0	21.9	280.4	280.9
315	315.0	316.0	311.2	318.8	4.6	5.3	7.2	8.3	10.7	12.4	14.0	16.1	17.3	19.9	21.4	24.7	315.4	316.0
355	355.0	356.1	350.7	359.3	5.1	5.9	8.1	9.4	12.0	13.8	15.8	18.2	19.6	22.6	24.1	27.8	355.4	356.0
400	400.0	401.2	395.2	404.8	5.8	6.7	9.1	10.5	13.5	15.6	17.8	20.5	22.0	25.3	27.2	31.3	400.4	401.0

Note: All pipes available with ISI mark except 400mm.

## WORKING PRESSURE V/S TEMPERATURE OF PIPE

As the temperature of the fluid flowing through installation increases, the pressure withstanding capacity of installation wall decreases. So to find out the pressure rating of PVC Pipes & Fittings at a required temperature, multiply the pressure rating of Pipes & Fittings by derating factor given in the table.

Example: Rated pressure of the installed system is 10Kg.  
 Up to 25°C, the system can stand 10Kg pressure.  
 If the temperature is 40°C, the derating factor is 0.71.  
 Therefore  $10 \times 0.71 = 7.1\text{Kg}$ .  
 So, the system can withstand 7.1Kg.

Temp Deg (°C )	Derating factor
0-25	1
27	0.95
30	0.89
35	0.79
40	0.71
45	0.63
50	0.42
55	0.34
60	0.25

## FITTINGS RANGE

Trubore offers the highest range of uPVC Pipes & Fittings with a wide range from 20mm to 60mm and working pressure of 10kg/cm<sup>2</sup>, 6kg/cm<sup>2</sup> and 4kg/cm<sup>2</sup> as well as non-pressure fittings. Trubore is crafted to perfection with the highest rating of ISI

mark and is available through a wide-spread network.

**COUPLER (6 KG)**



63mm to 110mm

**COUPLER (10 KG)**



20mm to 50mm

**COUPLER (LW)**



63mm to 160mm

**COUPLER (PN6)**



160mm

**COUPLER (PN16)**



20mm, 25mm and 32mm

**ELBOW (6 KG)**



50mm to 110mm

**ELBOW (10 KG)**



20mm to 40mm

**ELBOW (LW)**



40mm to 200mm

**ELBOW (PN6)**



63mm to 160mm

**ELBOW (PN16)**



20mm, 25mm and 32mm

**ELBOW 45°**



25mm & 32mm

**END CAP (6 KG)**



50mm to 110mm

**END CAP (10 KG)**



20mm to 40mm

**END CAP (LW)**



63mm to 180mm

**END CAP THREADED**



20mm to 110mm

**FABRICATED BEND 90°**



20mm to 200mm

**FABRICATED COUPLER**



63mm to 315mm

**FOUR WAY TEE (WITHOUT COLLAR)**



63mm to 20mm to 63mm to 32mm

**FEMALE THREADED ADAPTOR**



20mm to 110mm

**MALE THREADED ADAPTOR**



20mm to 110mm

**PVC BALL VALVE**



20mm to 63mm

**REDUCER**



25mm X 20mm to 160mm X 110mm

**REDUCING BUSH**



25mm X 20mm to 110mm X 90mm

**REDUCING FEMALE THREADED ADAPTOR**



50mm x 40mm to 90mm x 75mm

**REDUCING TEE**



40mm x 20mm to 110mm x 90mm

**REDUCING TEE LW**



160mm X 110mm

**SERVICE SADDLE**



63mm x 20mm to 90mm x 32mm

**TEE (6 KG)**



50mm to 110mm

**TEE (10 KG)**



20mm to 40mm

**TEE (PN6)**



63mm to 160mm

**TEE (PN16)**



20mm, 25mm and 32mm

**TEE (LW)**



40mm to 160mm

**THREADED ELBOW**



25mm x 25mm, 25mm x 20mm, 32mm x 20mm, 32mm x 25mm

**THREADED TEE**



25mm x 25mm, 25mm x 20mm, 32mm x 20mm, 32mm x 25mm

**UNION**



25mm & 32mm

**REDUCING FEMALE THREADED ADAPTOR (BRASS INSERT)**



25mm X 1/2" & 32mm X 1/2"

**REDUCING FEMALE THREADED ELBOW (BRASS INSERT)**



25mm X 1/2" & 32mm X 1/2"

**REDUCING FEMALE THREADED TEE (BRASS INSERT)**



25mm X 1/2" & 32mm X 1/2"

**BOTTLE**



25ml to 500ml

**Tin**



50ml to 1000ml

**ESTEEM RANGE**

**CAN**



1000ml & 5000ml

**ELBOW ESTEEM**



63mm to 110mm

**TEE ESTEEM**



63mm to 110mm