

IS:4985-2000



CM/L 1235335



Rigid PVC Pressure Pipes and Fittings

... The most comprehensive range with a wide spectrum of fittings

The Supreme Industries Ltd. is an acknowledged leader of India's plastic industry. It is credited with pioneering several path breaking products and has gained a valuable experience in providing innovative and cost effective piping solutions. The Company has been a trend setter and a torch bearer in the transition from conventional to advanced plastic piping products in the country. The Company's objective is to meet the growing needs of its clientele in water and waste management and in infrastructure sector through a specially designed high performance range of piping products. The innovative product portfolio offered by Supreme is extensive in nature and applications. With its range of over 7500 products, the most comprehensive in the piping industry, Supreme caters to almost every conceivable need and application in piping.

Supreme uPVC pressure piping system with a wide spectrum of pipes and fittings in different sizes and pressure classes is an ideal solution for water supply and irrigation. Supreme pressure piping system has become the prime choice of farmers, water supply bodies and different government institutions who have successfully replaced the conventional piping with our products.



Jeevan bhar ka saath...

Rigid PVC Pressure Pipes and Fittings

The system

Supreme offers an exhaustive range of uPVC pressure pipes and fittings. Pressure pipes are manufactured as per IS:4985-2000 standards and are available in 20 to 450mm sizes in different pressure classes. Pipes with both types of joints, i.e., solvent cement type and rubber seal type are available. Varieties of moulded fittings and wide range of handmade fittings are also available. Moulded fittings are manufactured as per IS:7834 and fabricated fittings are manufactured as per IS:10124 and company standards. These pipes and fittings are used for a variety of applications like, irrigation, water supply, industrial process lines, swimming pools, firefighting mains, etc. These pipes are superior to CI, DI or RCC pipes in terms of being light in weight, easier and quicker installation, excellent corrosion and chemical resistance properties, high flow rates, long life and economy. These pipes have the approval of MJP.

Features and benefits

Odorless and hygienic - These pipes are an excellent choice for carrying potable water as they do not allow contamination.

High corrosion resistance - Being immune to chemical, electrolytic and galvanic action, these pipes are free from corrosion which ensures a much longer and useful life.

High chemical resistance - Pipes offer excellent resistance to acids, oxidizing agents, alkalis, oils and domestic effluents.

Smooth bore - Pipes have a mirror smooth inside surface offering much better flow characteristics in comparison to AC, CI and GI pipes.

Self extinguishing quality - This feature eliminates the need for fire resistant coatings.

Maintenance free - Corrosion resistant property of the PVC pipes eliminates the need for repeated painting or coating like in the case of GI pipes.

Long lasting - As these pipes are free from weaknesses caused by scale formation, rusting, weathering and chemical action, they have a much longer effective life.

Economical - Despite being superior to conventional pipes, Supreme PVC pipes are very light in weight and last much longer than older piping systems offering a great economy in handling, transportation, installation and replacement.

Salient features

- General dimensions conform to IS:7834-87.
- Wall thickness is designed to meet required working pressure.
- Close to dimensional tolerance.
- Different working pressure ratings upto 16 kgf/cm² for different sizes

Properties

- Hazen Williams constant : 150 (remains constant)
- Specific gravity : 1.41 -1.46
- Coefficient of linear expansion : 5.4×10^{-5} mm/m/°C
- Combined flexural and compressive strength : 600 -650 kgf/cm²
- Impact strength at 20°C : 3 Kgf/cm²
- Modulus of elasticity : $3 - 3.8 \times 10^4$ Kgf/cm²
- Vicat softening point : 80°C
- Electrical resistance : 10^{14} ohm-cm

Dimensions of uPVC Pressure Pipes as per IS:4985-2000

Nominal Outside Diameter (mm)	Tolerance on Outside Diameter	Wall Thickness (mm)													
		Class 1(PN) 2.5 kgf/cm ²		Class 2(PN) 4 kgf/cm ²		Class 3(PN) 6 kgf/cm ²		Class 4(PN) 8 kgf/cm ²		Class 5(PN) 10 kgf/cm ²		Class 6(PN) 12.5 kgf/cm ²		Plumbing Pipes	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
20	+ 0.3	-	-	-	-	-	-	-	-	1.1	1.5	1.4	1.8	2.8	3.3
25	+ 0.3	-	-	-	-	-	-	1.2	1.6	1.4	1.8	1.7	2.1	2.9	3.4
32	+ 0.3	-	-	-	-	-	-	1.5	1.9	1.8	2.2	2.2	2.7	3.4	3.9
40	+ 0.3	-	-	-	-	1.4	1.8	1.8	2.2	2.2	2.7	2.8	3.3	3.6	4.2
50	+ 0.3	-	-	-	-	1.7	2.1	2.3	2.8	2.8	3.3	3.4	4.0	3.7	4.3
63	+ 0.3	-	-	1.5	1.9	2.2	2.7	2.8	3.3	3.5	4.1	4.3	5.0		
75	+ 0.3	-	-	1.8	2.2	2.6	3.1	3.4	4.0	4.2	4.9	5.1	5.9		
90	+ 0.3	1.3	1.7	2.1	2.6	3.1	3.7	4.0	4.6	5.0	5.7	6.1	7.1		
110	+ 0.4	1.6	2.0	2.5	3.0	3.7	4.3	4.9	5.6	6.1	7.1	7.5	8.7		
125	+ 0.4	-	-	2.9	3.4	4.3	5.0	-	-	-	-	-	-		
140	+ 0.5	2.0	2.4	3.2	3.8	4.8	5.5	6.3	7.3	7.7	8.9	9.5	11.0		
160	+ 0.5	2.3	2.8	3.7	4.3	5.4	6.2	7.2	8.3	8.8	10.2	10.9	12.6		
180	+ 0.6	2.6	3.1	4.2	4.9	6.1	7.1	8.0	9.2	9.9	11.4	12.2	14.1		
200	+ 0.6	2.9	3.4	4.6	5.3	6.8	7.9	8.9	10.3	11.0	12.7	13.6	15.7		
225	+ 0.7	3.3	3.9	5.2	6.0	7.6	8.8	10.0	11.5	12.4	14.3	15.3	17.6		
250	+ 0.8	3.6	4.2	5.7	6.5	8.5	9.8	11.2	12.9	13.8	15.9	17.0	19.6		
280	+ 0.9	4.1	4.8	6.4	7.4	9.5	11.0	12.5	14.4	15.4	17.8	-	-		
315	+ 1.0	4.6	5.3	7.2	8.3	10.7	12.4	14.0	16.1	17.3	19.9	-	-		
355	+ 1.1	5.1	5.9	8.1	9.4	12.0	13.8	15.8	18.2	-	-	-	-		
400	+ 1.2	5.8	6.7	9.1	10.5	13.5	15.6	-	-	-	-	-	-		
450	+ 1.4	6.5	7.5	10.3	11.9	15.2	17.5	-	-	-	-	-	-		

Note: 1) Pipes are offered in Light Grey (LG) and/or Dark Grey (DG) colours in standard lengths of 6m. Pipes are offered plain or socketed, based on diameter and class of pipe. 2) Ringtight pipes with integral rubber ring socket (Elastomeric joint) are available from 63mm to 315mm in 4, 6 and 10 kgf/cm² pressure class. 3) Prefix "PN" indicates Nominal Pressure, i.e., working pressure.



Solvent Cement

Size	Box qty
50 ml	100
100 ml	50
250 ml	80
500 ml	50
1000 ml	24
5000 ml	4

Note: Recommended for smaller sizes and lower pressure class, upto 75mm size - any pressure class, upto 110mm size in 4 and 6 kgf/cm², upto 200mm size - 2.5 kgf/cm²



Solvent Cement Heavy Duty

1000 ml
5000 ml

Note: Recommended for larger sizes and higher pressure class, 90mm and 110mm in 10 and 12.5 kgf/cm², 140mm and above sizes in 4,6,10 and 12.5 kgf/cm²

Size in mm

- 110-175x15 (1/2")
- 110-175x20 (3/4")
- 110-175x40 (1 1/2")
- 200-300x40 (1 1/2")
- 200-300x50 (2")
- 300-400x50 (2")



Strap Saddle

Handmade Fittings: Besides a vast range of moulded fittings, an exhaustive range of handmade fitting is also available from Supreme. This range of products includes couplers, bends, short bends, tee's, reducing tee's, cross tee's, tail pieces, reducers, single or reducing Y's, end caps, leakage couplers etc. in 20 to 450mm sizes in different pressure classes.

Handmade division of the Company is equipped to make any tailor-made product as per customer requirements. This implies a complete system solution made of the same material eliminating the dependence of the customer on any other conventional product.

Handling Instructions: Pipes should be kept on an even surface while storing. They should be properly supported and should not be stacked for more than 1.5 m height for a long duration.

While laying big pipelines, provision should be made for expansion of joints, air venting and proper anchorage.

Pipes or fittings should not be cleaned with solvent cement. Quality of solvent cement plays an important role. It is, therefore, recommended that good quality solvent cement be used.

For large diameter and higher class pipes (6 Kg/cm² and above), always use heavy duty solvent cement. Very old, hard, semi-fluid solvent cement should not be used.

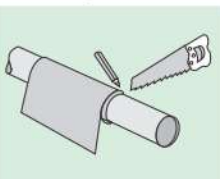


Installation of Supreme pipeline in the field

Consumption of Solvent Cement

Diameter of pipe (mm)	20	25	32	40	50	63	75	90	110	140	160	180	200	225	250	280	315	355	400	450
Approx no of joints which can be made per litre of solvent cement	354	270	225	180	130	125	103	79	54	36	27	25	15	12	9	7	5	3	2	2

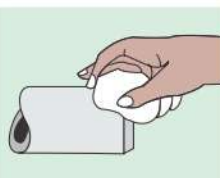
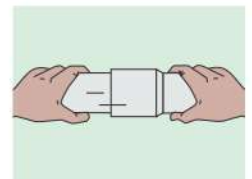
Jointing Instructions:



Cut the pipe as square as possible. Ensure that fitting of the pipe with socket of fitting is correct.

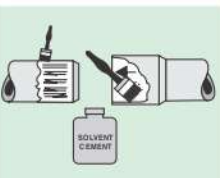
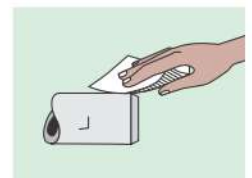
Total length of socket should be marked on pipe. In most cases, the pipe inserted should be up to the marked line and in no case should it be less than 2/3rd of pipe end.

The pipe and the socket should be clean and dry. Dust, oil, water, grease etc. should be wiped off with dry cloth or a cleaner from the surfaces to be coated with solvent cement



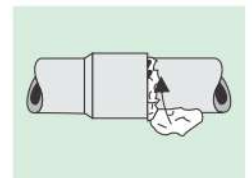
Roughen the outer surface of the pipe and the inner surface of the socket using sand paper or piece of hacksaw blade up to the entry mark. Stir solvent cement thoroughly.

Apply a thick coat of solvent cement using a flat clean brush evenly on the inner surface of the socket for full length of insertion and then on the outer surface of the pipe end up to the marked line.



After application of solvent cement, insert the pipe within one minute of application into the socket. Hold the joint for a few seconds and ensure that the pipe does not come out the fitting. Wipe off extra cement. Let it dry. Within 24 hours, your Supreme rigid PVC pipes are ready for use.

In case of big pipeline projects, it is recommended to refer to our installation guide.

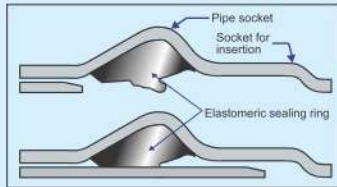


Ringtight Rigid PVC Pipes with Sealing Rings

Ringtight advantages

These pipes are specially designed and suitable to overcome difficulties experienced while jointing higher diameter pipes using solvent cement and offer the following advantages:-

- As elastomeric sealing rings are used, requirements and precautions associated with quality and quantity of solvent cement are eliminated.
- Unlike solvent type joints, curing period is not required which allows the pipelines to be tested and brought in use immediately after jointing.
- Pipe laying and jointing is very easy, quicker and more reliable. Pipes up to 140mm size can be jointed by hand but large diameter pipes require a jack.
- Joints are stable, watertight and can resist loads from horizontal and vertical tractive forces.
- Joints can accommodate angular deflection up to 2° and axial displacement resulting from thermal expansion and contraction which eliminates the need of expansion joints as required in solvent type joints.
- Joints can be made in any climatic condition.



About Elastomeric sealing ring

Unique design of sealing ring supplied with the pipe is made from high quality EPDM rubber to meet the practical requirements of sites, which add to installation efficiency. This seal can be safely and easily fitted in wet, cold and muddy conditions. These sealing rings offer the following advantages:-

- Very low assembling force is required for joint.
- It has large operational life (minimum life is about 50 years).
- These rings give greater reliability and joint tightness and can withstand pressures beyond that of specified testing pressure of the pipes.
- Specially suitable for underground applications.
- It is resistant to salt water, organic vegetable oils, dilute acids and alkalis normally found in waste water. It is also resistant to ultra violet radiations, bacteria, fungus and termites. In short, Supreme ringtight pipes are designed to give long term satisfaction to the customers.



Jointing instructions

1. Clean the inside of the socket. Remove all traces of mud, dirt, grease, gravel and clean the elastomeric sealing ring.
2. Shape the ring into a heart shape by pinching a portion of ring from inside. Insert it into the socket and release to seat it into the groove.
3. Factory supplied pipes are provided with a 15° chamfer. Mark the insertion depth on spigot of pipe. Clean and apply lubricant to the pipe insertion depth before pushing it into the socket.
4. If pipe needs to be cut, it should be cut perpendicular to the axis of the pipe after which it should be chamfered properly.
5. Align the socket and spigot correctly in the horizontal and vertical planes. Before insertion, ensure that no sand or dirt adheres to the lubricated surface of the pipe. Care should be taken that the spigot end is inserted in the socket at the correct angle.
6. Push the spigot into the socket until it reaches the depth of entry mark. Do not over insert. This must be done manually. Use a steel crow bar, if necessary. Protect the pipe with a wooden block. Insertion of spigot end inside the socket should be at the correct angle.
7. In case of large diameter pipes, if the crow bar does not give sufficient leverage, use of a jointing jack may be helpful.



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