



Hot and Cold Water System

... The most reliable plumbing system



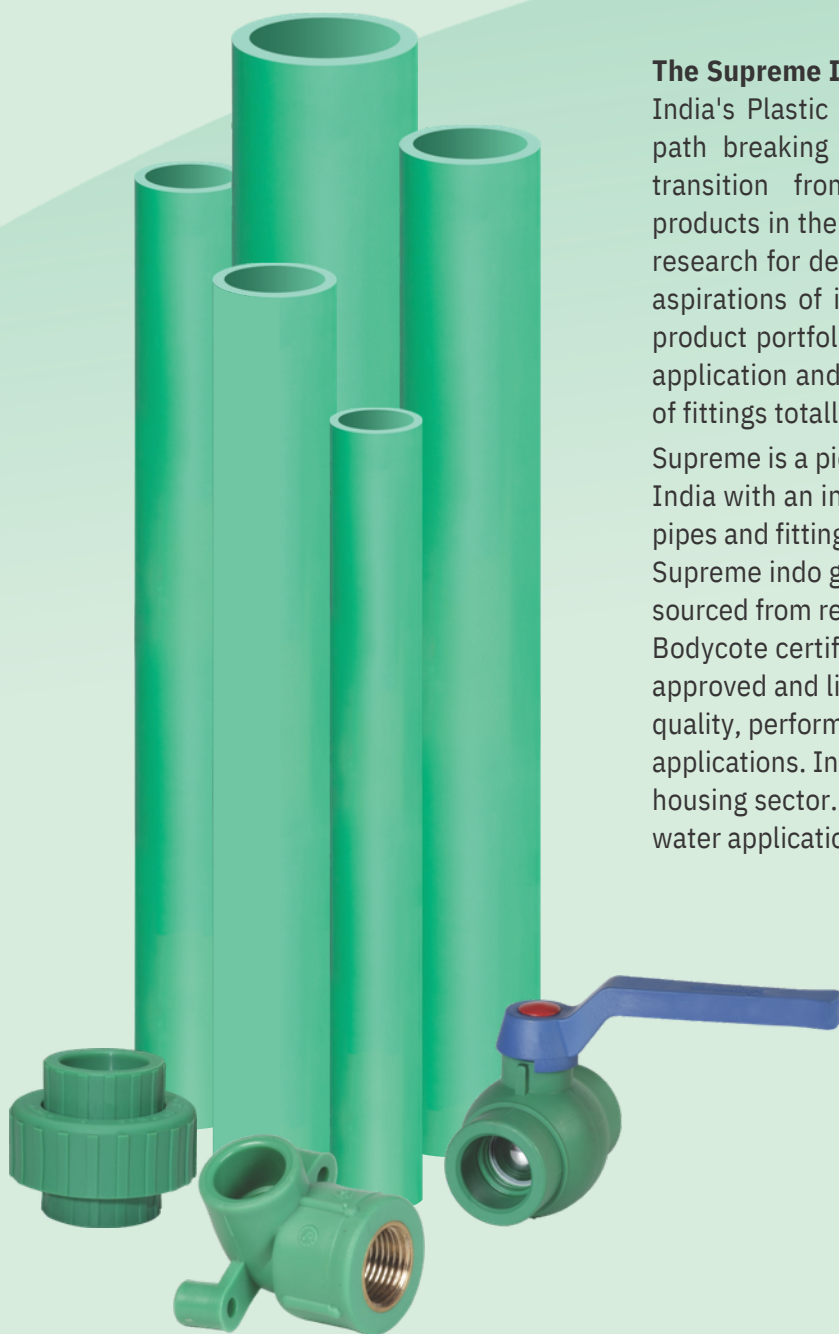
IS 15801:2008



CM/L 7989319

The Supreme Industries Limited is an acknowledged leader of India's Plastic Industry. It is credited with pioneering several path breaking products and has been a torchbearer in the transition from conventional to advanced plastic piping products in the country. Its customer-centric approach fuels its research for designing unmatched quality products to meet the aspirations of its quality conscious customers. The innovative product portfolio offered by Supreme is extensive in range and application and comprises a variety of pipes and vast spectrum of fittings totalling over 16,000 diverse product SKU's.

Supreme is a pioneer in introducing the PP-R piping system in India with an indigenously manufactured complete range of pipes and fittings with necessary heating tools and accessories. Supreme indo green PP-R is manufactured using PP-R type-3, sourced from reputed European suppliers which have Bodycote certification. Indo green pipes and fittings are approved and listed by W.R.A.S., UK, thus signifying their quality, performance, and suitability for potable water applications. Indo green PP-R is the most ideal solution for the housing sector. It is the superior solution for any hot and cold water application.



Jeevan bhar ka saath...

THE SYSTEM

SupremeIndo green PP-R, designed for hot and cold water applications, is a modern and highly suitable system for all types of plumbing needs. In addition to plumbing, it is also ideal for a variety of other applications. The unique chemical structure of Indo green PP-R ensures well-balanced mechanical properties and excellent long-term heat resistance. More importantly, the water flowing through these pipes remains biologically unaffected, making the system exceptionally hygienic and safe for potable water applications. With a proven performance record of over 30-35 years in Europe, the Gulf, China, and

Russia,

Indo green has earned widespread global acceptance. These pipes are also approved by CFTRI.

MATERIAL PROPERTIES:

- Softening temperature : 0.909 g/cm³
- Density at 23°C : 131.3°C
- E- modulus : 808 Mpa
- Coefficient of thermal conductivity : 0.21W/m°C
- Impact strength : 23°C - No break, 0°C - 160 KJ/m²
- Coefficient of linear thermal expansion : 0.12mm/m°C

FIELDS OF APPLICATION

Indo green PP-R is designed for hot and cold water supply and heating applications and it is suitable for different applications listed below-

- Hot and cold water supply in residential, industrial, commercial and public projects
- Solar heater applications
- Drinking water and liquid foods
- Watering systems for greenhouses and gardens
- Transportation of aggressive fluids
- Water purifying plants
- Radiator heating
- Traditional heating systems
- Air distribution and compressed air systems
- Chilled water and air conditioning

UNIQUE FEATURES

Light weight, easy and quick assembly- Results in extensive saving in time and labour.

Ideal and safest system for carrying potable water- PP-R is absolutely free from corrosion and negative biological effects. It does not break down even under the harshest water conditions; hence the quality of water never deteriorates. It is in full compliance with the International standards on the use of plastics materials for the transportation of potable water.

Safe and watertight joints- Joints are made by fusion process using polyfusion device. This process gives homogeneous, integral and watertight joints, which last for a long time.

Excellent resistance to corrosion and chemical attacks- PP-R pipes and fittings are stable against the majority of known aggressive and toxic chemicals, aggressive soils and fluids in the external environment.

Reduced head loss- Mirror smooth inside surface ensures high flow rates and very low frictional losses.

Low thermal conductivity- Results in saving insulation cost, thereby reducing overall operational costs.

Free from scaling- Due to the unique properties of PP-R, limestone or other deposits cannot form and hence there is no scaling or blockage in the pipelines.

High impact strength- Indo green PP-R has a very good impact strength and hence no possibility of any breakage.

Low on sound- The sound dampening property of PP-R is a major advantage in plumbing, flushing and pressurized flow applications.

Long operational durability- Indo green PP-R ensures a minimum 50 years of trouble free performance.

Highly economical in long run- This system is most cost effective than any other plumbing system. Moreover, due to savings in installation and insulation costs, this system is even comparable with standard make class-B GI piping system.

Pipe dimensions a sperIS:15801 specifications

Nominal Size(mm)	Outer Diameter (mm)		SDR-11 (PN 10)		SDR-7.4 (PN 16)		SDR-6 (PN 20)	
			Wall Thickness (mm)		Wall Thickness (mm)		Wall Thickness (mm)	
	Min	Max	Min	Max	Min	Max	Min	Max
20								
25	20.0	20.3	1.90	2.30	2.80	3.30	3.40	4.00
32	25.0	25.3	2.30	2.80	3.50	4.10	4.20	4.90
40	32.0	32.3	2.90	3.40	4.40	5.10	5.40	6.20
50	40.0	40.4	3.70	4.30	5.50	6.30	6.70	7.60
63	50.0	50.5	4.60	5.30	6.90	7.80	8.30	9.40
75	63.0	63.6	5.80	6.60	8.60	9.70	10.50	11.80
90	75.0	75.7	6.80	7.70	10.30	11.60	12.50	14.00
110	90.0	90.9	8.20	9.30	12.30	13.80	15.00	16.70
160	110.0	110.9	10.00	11.20	15.10	16.90	18.30	20.40
	160.0	161.5	14.60	16.30	21.90	24.30	26.60	29.50

Note: 1. Pipes are offered in Indo green (IG) colour with standard length of 3m, duly packed in plastic bags. 2. Non standard length of 4m and 6m can be offered against bulk requirements.

FITTINGS



Socket / Polyfusion Equipment and Accessories



F - Fabricated, BWT - Butt welding type

THERMAL EXPANSION OF THE SYSTEM

In PP-R, deformations because of the expansion are absorbed due to "low elastic modulus" of the pipe material. Therefore no real problems are envisaged due to expansion in concealed installations. In case of external applications on ceiling or walls, where long lengths are installed, the effects of expansion and contraction shall be considered while installing indo green system. This problem can be solved either by using suitable expansion loops or clamps.

(For more details, please refer to our assembly regulation manual).

POLY-FUSION WELDING - SOCKET FUSION

Joints of PP-R pipes and fittings are usually made by polyfusion welding also called socket fusion. This process consists of fusing the melted material of the external surface of the pipe with the internal surface of the fitting after heating them to 260° to 280°C using a welding machine called a polyfusion device. Thus, the polyfusion process provides homogeneous, integral, long-lasting and leak-proof joints.

POLYFUSION WELDING - JOINTING INSTRUCTIONS

Cutting: Cut the pipe square to the required length using a pipe cutter. Deburr the cut end, if necessary.

Cleaning: Prior to welding, ensure that the pipe and fitting are clean and dry.

Marking: Mark the required socket insertion depth on the pipe.

Heating: Ensure the polyfusion device is heated to 260°-270°C for welding.

HEAT LOSS AND INSULATION REQUIREMENTS

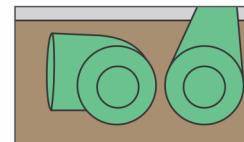
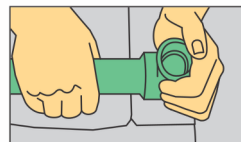
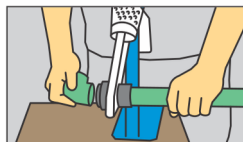
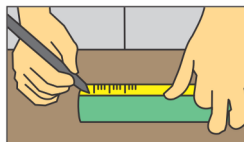
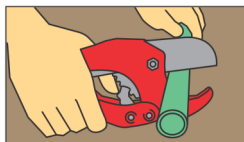
Due to the low thermal conductivity of indo green PP-R (0.21 W/m°C) normally it may not be necessary to insulate, when used for hot water concealed application. However, for application where central boiler is used for distribution of hot water, and the circulation of hot water being continuous, it is necessary to insulate distribution lines to prevent excessive loss of heat and energy wastage.

The first weld can be made after 5 minutes, when the heating indicator light goes off. Heat the pipe and fitting as per the recommended heating time. The heating time starts when the pipe and fitting have been pushed to the correct welding depth of the matrices. While heating, apply slight pressure from both sides.

Welding: After the specified heating time, remove the pipe and fitting from the matrices. Push the heated end of the pipe into the fitting up to the previously marked depth. Do not turn or twist the pipe or fitting while inserting into or removing from the matrices, or while inserting the pipe into the fitting.

Cooling: After the specified cooling time, the joint is ready.

Concealed work: While doing concealed bathroom work, it is easier to make the required network on floor by proper measurement of different pipe lengths. To avoid misalignment, guiding marks on pipes and fittings should be referred.



Polyfusion welding times according to DVS 2207 norms

Pipe size (mm)	16	20	25	32	40	50	63	75	90	110
Heating time (min) seconds	5	5(3)*	7(4)	8(4)	12(6)	12(9)	24(12)	30(15)	40(20)	50(25)
Working time (max) time of removal, seconds		4	4	6	6	6	8	8	8	10
Cooling time (min) minutes	2	2	2	4	4	4	6	6	6	8
Depth of welding (mm)	13	14	15	16	18	20	24	26	29	32.5

Bracketed values are for PN 10 pipes

I Any specification may change without prior notice. I All information contained in this literature is given in good faith and believed to be accurate and reliable. Because of many factors which may be outside our knowledge or control and affect the use of the product, no warranty is given or implied with respect to such information, nor do we offer any warranty of immunity against patent infringement. No responsibility can be accepted for any error, omissions or incorrect assumptions.

(Plastic Piping Division)

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