RELPIPE PP-R PIPE

TECHNICAL DATA SHEET

Poly Propylene Random CO-Polymer pipes are used for Hot and Cold water supply for piping in residential, industrial and public installations. PPR pipes can withstand high temperatures up to 95°C, making them suitable for use in hot water supply systems. PPR pipes have a long lifespan of up to 50 years or more under varying and extreme environmental conditions, making them a cost-effective option in the long term.

1. Typical Properties:

SPECIFICATION OF IS PIPES FOR ALL PP-R GRADES AS PER IS 15801:2008

16 - 200mm Nominal OD, Standard Dimension Ratio : SDR 5,SDR 6,SDR7.4 & SDR 11	

Sr.No	Parameter	Method No.	Unit	Specification Limits			
				Different Standard Dimension Ratio			
				SDR 5	**SDR 6**	**SDR 7.4**	**SDR 11**
1	Visual Appearance	IS 15801	-	Internal and External surfaces of the pipes shall be smooth, clean and free from grooving and other defects			
2	Outer Diameter	IS15801	mm	**REFER ANNEXURE – VIII**			
3	Wall Thickness	--do--	mm				

4	Ovality	--do--	mm	
5	Reversion	IS 12235 (Part 5)	%	Max 2
6	Density	IS 12235 (Part 14)	Kg/m3	900 - 910
7	Melt Flow Rate	IS 13360 (Part4)	gms/10mins	≤ 0.5
8	Hydrostatic Pressure Acceptance Test (@1hrs/16.0mpa/20^{0}C)	IS 12235 (Part-8)	Hours	No localized swelling or leakage during the test period
9	Hydrostatic Pressure Acceptance Test (@22hrs/4.3mpa/95^{0}C)	--do--	Hours	No localized swelling or leakage during the test period
10	Hydrostatic Pressure Test Type Test (@165hrs/3.8mpa/95^{0}C (Once in a month)	--do--	Hours	No localized swelling or leakage during the test period
11	Hydrostatic Pressure Test -Type Test (@1000hrs/3.8mpa/95^{0}C (Once in three month)	--do--	Hours	No localized swelling or leakage during the test period
12	Hydrostatic Pressure Test – Fuison Compatibility Type Test (@165hrs/3.8mpa/95^{0}C (Once in a month)	--do--	Hours	No localized swelling or leakage during the test period
13	Hydrostatic Pressure Test -Type Test (@8760hrs/1.9mpa/95^{0}C (Once in three Years)	--do--	Hours	No localized swelling or leakage during the test period
14	Opacity	IS 12235 (Part 3)	%	< 0.2

Note: Sr.No 1 to 9 & 14 are considered as release parameters. If any parameter fails to meet the specification, necessary segregation (i.e defective pipes will be removed from the lot) and lot will be released accordingly.

ANNEXURE – VIII

OUTER DIAMETER, WALL THICKNESS, OVALITY CHART FOR PP-R PIPES AS PER IS15801:2008

		Different Standard Dimension Ratios (SDR)			
		Wall Thickness			
OD With Tol.(mm)	**Ovality (mm)**	**SDR 11**	**SDR 7.4**	**SDR 6**	**SDR 5**
16+0.3	1.2	-	2.20-2.70	2.70-3.20	3.30-3.90
20+0.3	1.2	1.90-2.30	2.80-3.30	3.40-4.00	4.10-4.80
25+0.3	1.2	2.30-2.80	3.50-4.10	4.20-4.90	5.10-5.90
32+0.3	1.3	2.90-3.40	4.40-5.10	5.40-6.20	6.50-7.40
40+0.4	1.4	3.70-4.30	5.50-6.30	6.70-7.60	8.10-9.20
50+0.5	1.4	4.60-5.30	6.90-7.80	8.30-9.40	10.10-11.40
63+0.6	1.5	5.80-6.60	8.60-9.70	10.50-11.80	12.70-14.20
75+0.7	1.6	6.80-7.70	10.30-11.60	12.50-14.00	15.10-16.90
90+0.9	1.8	8.20-9.30	12.30-13.80	15.00-16.70	18.10-20.20
110+0.9	2.2	10.00-11.20	15.10-16.90	18.30-20.40	22.10-24.60
125+1.2	2.5	11.40-12.80	17.10-19.10	20.80-23.10	25.10-27.90
140+1.3	2.8	12.70-14.20	19.20-21.40	23.30-25.90	28.10-31.20
160+1.5	3.2	14.60-16.30	21.90-24.30	26.60-29.50	32.10-35.60
180+1.7	3.6	16.40-18.30	24.60-27.30	29.00-32.10	36.10-40.00
200+1.8	4.0	18.20-20.30	27.40-30.40	33.20-36.80	--

2. Shelf Life :

The typical benchmark for PP-R Pipe life expectancy is 50 years.

3. Typical Processing Conditions :

Processing temperature: 160 – 200 OC

Processing parameters mentioned above are for reference only and not to be considered as specifications. They may vary based on the product to be manufactured.

4. **Applications :**

Hot and Cold water supply for piping in residential, industrial and public installations , Indoor applications.

5. **Storage Recommendations:**

The storage area should have a relatively smooth, level surface free of stones, debris or other materials that could damage the pipe or fittings. Where adequate ground conditions do not exist or when a bed cannot be prepared, the pipe may be placed on planking evenly spaced along the pipe length.

To avoid direct exposure to sun light, Pipes to be packed or covered and preferably stored in covered place.

6. **Recycling :**

The addition of not more than 5-10 percent of the manufacturer's own rework material conforming to this standard is permissible. No other rework material shall be used.

7. **After end of Use / Disposal :**

PPR plastic can be recycled up to 10 times before its quality is compromised.

(Note : Specifications are derived from respective Standards followed for manufacturing of Pipes.)