



OUR
COMMITMENT
TO QUALITY
IS ALWAYS 100%



KANHA PLASTICS PVT. LTD.

Manufacturer and Exporters of Commercial & Industrial PPR Pipes & Fittings

AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY

www.kptpipes.com



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From The Directors' Desk

Established in the year 2008, KPT is India's leading Pipe manufacturing company and a producer of various kind of piping solutions. The Brand "KPT" is well known as a hall mark of PPR-C plumbing systems in the plumbing industry. The company has been involved in manufacturing of PPR-C Piping Systems, Pneumatic pipes, Thermal FR Composite pipes, UPVC pressure piping systems, SWR piping systems & UPVC piping systems for agriculture use. The company has Hi-Tech plants for manufacturing of all the above mentioned products imported from Germany and Taiwan. We have wide range of industry specific piping products that meet the requirements of our targeted audience.

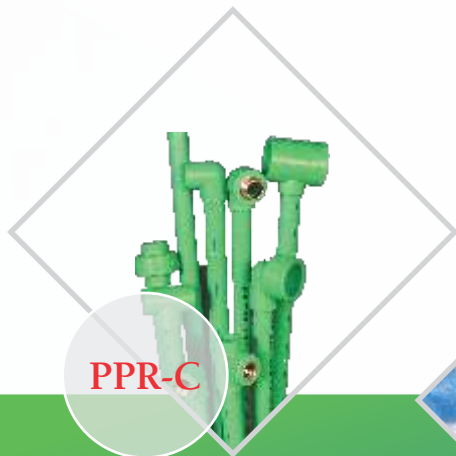
With our corporate office at New Delhi, Kanha Plastics Pvt. Ltd. has a manufacturing facility at Dehradun in Uttarakhand (India) and depots at 10 locations all across India. The company has witnessed an astounding growth rate of 40% in last 8 years since its inception and hopes to grow even more in the coming future as we have established ourselves as a premium brand targeting industrial as well as commercial plumbing solutions with advanced equipments. Our lineup and quality of products is in complete concurrence with the day to day needs of our customers and we strive to be trusted with more such targeted audience.

Overcoming challenges after challenges with the support of all our excellent workforce, we have done wonders in the past and we are confident to continue this feat in the future. We aim to increase our presence further in the market and quadruple our value in the market.

The future beckons with the promise of bigger challenges and we are ready for them with complete grit and determination. The present is giving us the strength to thrust ahead and we are confident that we shall continue to offer the best in terms of products, services and more importantly, values to our esteemed clients who have supported us through thick and thin times.



ONE OF THE FINEST & BIGGEST RANGE
OF COMMERCIAL &
INDUSTRIAL PPR PIPES
& FITTINGS UNDER ONE ROOF



20-200 MM RANGE
GLASS FIBER RANGE
FLAME RETARDANT RANGE



MONO AND TRIPLE LAYER
GREEN BLUE WHITE
GREY & RED COLOUR

CERTIFICATES & APPRECIATIONS





PPR-C



pneumato
PNEUMATIC PIPES



thermaplus
Thermal FR Composite Piping

Technical Information Polypropylene Random Copolymer

Why choose this type of material?

The thermoplastic resins most often used to make pipes for water and heating systems are:

- PE-X cross linked polyethylene
- PP-C copolymer polypropylene
- PB polibutene

All the above - mentioned resins belong to the polyolephine family, a group of plastic materials obtained by polymerization of unsaturated hydrocarbons, which have one or more double links.

In a conventional polymer the molecular chains are irregularly placed; they have fairly good mobility, heat causes oscillation in these chains until they break, resulting in alteration of the material's characteristics. Two ways of preventing this problem have been tested.

Researchers have selected polymers with long molecular chains because, as molecular weight increases, the mechanical characteristics of manufactured items improve; these chains must be as linear as possible, i.e. they must show a low number of ramifications and a high degree of crystallization by extrusion these chains are submitted to stretch, allowing crystallization of a further percentage.

Isotactic polymers show much better mechanical characteristics as compared to their correspondent amorphous polymers; they maintain their properties up to temperatures close to melting point. This describes the nature of polypropylene techno- polymers in a simple way.

The other way tested by researchers is creation of chemical links among molecular chains in order to make them much steadier and avoid their sliding. This procedure has been adopted for the cross linking of polyethylene- PE- X.

There is a very big production of PP copolymers it is therefore important that fitness of raw material used be proven; it must be suitable to bear the thermo mechanical stresses required of it in operation for a long time (50 years).

Thus it is guaranteed that goods manufactured have high mechanical properties; it has been stabilized with appropriate anti-oxidants to postpone the combined effects of pressure and temperature for a very long time.

PROPERTY OF RAW MATERIAL

KPT - PPR Plumbing Pipe system is made from Basel & Hyosung materials which are considered as one of the best PPR-C material all over the world, a Random Copolymer Polypropylene (PPR-C) approved for the production of pipes and fittings according to DIN 8078 & DIN 16962 standards. Reliance PPR Raw material is a thermoplastic resin which is transformed in to the finished product by a rise in temperature, which plasticises the material, allowing the pipe to be produced by means of EXTRUSION, and the fittings by MOULDING. The raw material is supplied in granules precolored. Special heat resistance is one of the features of this material, Its physical and chemical properties are well suited to the transfer of potable water and in the heating sector. Depending on pressure it is possible to use KPT - pipes for constant temperatures up to 70°C with service life of more than 50 years. Peak temperatures of 100°C arising from short disruptions are not creating any problems.

Advantages of KPT PPR-C Piping System

KPT pipes and fittings are made from polypropylene random co polymer specially developed for this use. Its characteristic make it suitable for both Industrial and Commercial applications with outstanding reliability over time.

One special feature of the KPT PPR-C pipe system is the assembly technique, in which the parts to be connected are welded by melting and fusion. After fusion welding, the pipe and fittings form a single continuous body with none of the problems, which may derive from potential leakage points. This makes the joints as PERMANENT. No sealants or adhesives are required for these permanent connections.

Special Features of KPT PPR-C Piping System

Anti Corrosive & Chemical Resistant - Chemically inert and highly resistant to wide range of acid bases. Suitable for highly corrosive areas and industrial cooling water, drinking water system.

Withstanding High Pressure - Pipes and fittings can withstand up to 20 kg/sqcm pressure. Suitable for high pressure application like Compressed Air Lines.

Low Pressure Drop - Because of the very smooth non porous inner surface of pipes and fittings the pressure loss is less than metallic pipes, which results saving of pumping energy considerably.

Withstanding Higher Temperature - Can withstand upto 95°C. Best pipe for heated water transport in solar applications.

Hygienic & Harmlessness - KPT PPR-C pipes are certified as food grade pipes as per DIN 1998 T2. Best piping system for drinking water, RO plants and DM Plants.

Low Thermal Conductivity - The material's high level of thermal insulation guarantees low heat loss on the part of fluid transport. (0.24 W/mK)

Low Noise - Having high sound insulation value, results in lower noise level at the time of high velocity flow.

Non Toxic - Recyclable - Unlike PVC pipes, KPT PPR-C pipes are non toxic at the time of fire. PPR-C is recyclable material.

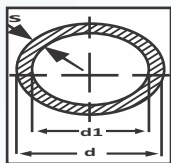
High Impact Rate - KPT PPR-C pipes are having high impact strength compare to any plastic pipe.

Low Flammability - KPT PPR-C pipes and fittings comply with fire classification B2 (normal inflammable). In case of fire no toxic emission to atmosphere like PVC pipes.

Resistant to stray electrical current - Thanks to high electrical insulating properties, KPT PPR-C pipe system is unaffected by stray currents

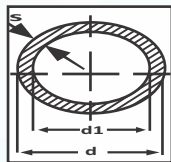
Like SS Pipe - The characters of KPT PPR-C piping system is almost like SS. KPT PPR-C pipes will have more advantage than SS for the specific application requirements.





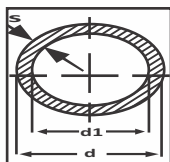
**KPT PIPE SDR 11/
S 5 / PN 10**

Pipe		Diameter	Wall Thickness	Internal Diameter	Water Content
Dimension	Packing Unit	d(mm)	S(mm)	di(mm)	1/m
20mm	100m	20	1.9	16.2	0.206
25mm	100m	25	2.3	20.4	0.327
32mm	40m	32	2.9	26.2	0.539
40mm	40m	40	3.7	32.6	0.834
50mm	20m	50	4.6	40.8	1.307
63mm	20m	63	5.8	51.4	2.074
75mm	12m	75	6.8	61.4	2.959
90mm	8m	90	8.2	73.6	4.252
110mm	4m	110	10.0	90.0	6.359
160mm	4m	160	14.6	130.8	13.430



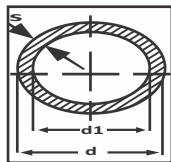
**KPT PIPE SDR 9/
S 4 / PN 12**
(AIR-O-GUARD PIPE SKY
BLUE COLOUR)

Pipe		Diameter	Wall Thickness	Internal Diameter	Water Content
Dimension	Packing Unit	d(mm)	S(mm)	di(mm)	1/m
20mm	100m	20	2.2	15.6	0.191
25mm	100m	25	2.7	19.6	0.302
32mm	40m	32	3.6	24.8	0.483
40mm	40m	40	4.6	30.8	0.745
50mm	20m	50	5.8	38.4	1.158
63mm	20m	63	7.2	48.6	1.854
75mm	12m	75	8.6	57.8	2.623
90mm	8m	90	10.2	69.6	3.803
110mm	4m	110	12.6	84.8	5.645
160mm	4m	160	18.2	123.6	11.992



**KPT PIPE SDR 7.4/
S 3.2 / PN 16**

Pipe		Diameter	Wall Thickness	Internal Diameter	Water Content
Dimension	Packing Unit	d(mm)	S(mm)	di(mm)	1/m
20mm	100m	20	2.8	14.4	0.163
25mm	100m	25	3.5	18.0	0.254
32mm	40m	32	4.4	23.2	0.423
40mm	40m	40	5.5	29.0	0.660
50mm	20m	50	6.9	36.2	1.029
63mm	20m	63	8.6	45.8	1.647
75mm	12m	75	10.3	54.4	2.323
90mm	8m	90	12.3	65.4	3.358
110mm	4m	110	15.1	79.8	4.999
160mm	4m	160	21.9	116.2	10.599



**KPT PIPE SDR 6/
S 2.5 / PN 20**

Pipe		Diameter	Wall Thickness	Internal Diameter	Water Content
Dimension	Packing Unit	d(mm)	S(mm)	di(mm)	1/m
20mm	100m	20	3.4	13.2	0.137
25mm	100m	25	4.2	16.6	0.216
32mm	40m	32	5.4	21.2	0.353
40mm	40m	40	6.7	26.6	0.556
50mm	20m	50	8.3	33.4	0.876
63mm	20m	63	10.5	42.0	1.385
75mm	20m	75	12.5	50.0	1.963
90mm	12m	90	15.0	60.0	2.827
110mm	4m	110	18.3	73.4	4.229
160mm	4m	160	26.6	106.8	8.954

PERMISSIBLE WORKING PRESSURE

The below table list is the allowable working pressure for pipes with different pressure class under specific temperature and work life.
Under normal work pressure and conditions, the life of KPT PPR Piping system is guaranteed to be 50 years at least.

Temperature in C	Years of Service	Allowable working pressure, in bar for			
		PN-10 (SDR 11)	PN-12 (SDR 9)	PN-16 (SDR 7.4)	PN-20 (SDR 6)
10°C	1	17.6	24.0	27.8	35.0
	5	16.6	23.2	26.4	33.2
	10	16.1	22.9	25.5	32.1
	25	15.6	22.5	24.7	31.1
	50	15.2	22.2	24.0	30.3
	100	14.8	21.6	23.4	29.5
20°C	1	15.0	20.9	23.8	30.0
	5	14.1	20.2	22.3	28.1
	10	13.7	19.9	21.7	27.3
	25	13.3	19.6	21.1	26.5
	50	12.9	19.3	20.4	25.7
	100	12.5	18.7	19.8	24.9
30°C	1	12.8	18.1	20.2	25.5
	5	12.0	17.4	19.0	23.9
	10	11.6	17.2	18.3	23.1
	25	11.2	16.9	17.7	22.3
	50	10.9	16.6	17.3	21.8
	100	10.6	16.0	16.9	21.2
40°C	1	10.8	15.5	17.1	21.5
	5	10.1	15.0	16.0	20.2
	10	9.8	14.7	15.6	19.6
	25	9.4	14.4	15.0	18.8
	50	9.2	14.2	14.5	18.3
	100	8.9	13.7	14.1	17.8

Temperature in C	Years of Service	Allowable working pressure, in bar for			
		PN-10 (SDR 11)	PN-12 (SDR 9)	PN-16 (SDR 7.4)	PN-20 (SDR 6)
50°C	1	9.1	13.3	14.4	18.2
	5	8.5	12.8	13.5	17.0
	10	8.2	12.6	13.1	16.5
	25	8.0	12.3	12.6	15.9
	50	7.7	12.1	12.2	15.4
	100	7.4	11.5	11.8	14.9
60°C	1	7.6	11.2	12.1	15.5
	5	7.2	10.8	11.4	14.3
	10	6.9	10.6	11.0	13.8
	25	6.7	10.4	10.5	13.3
	50	6.4	10.2	10.1	12.7
	100	6.4	10.2	10.1	12.7
70°C	1	6.5	9.4	10.3	13.0
	5	6.0	9.1	9.5	11.9
	10	5.9	8.9	9.3	11.7
	25	5.1	7.6	8.0	10.1
	50	4.3	6.3	6.7	8.5
	100	4.3	6.3	6.7	8.5
80°C	1	5.5	7.9	8.6	10.9
	5	4.8	7.5	7.6	9.6
	10	4.0	6.2	6.3	8.0
	25	3.2	5.0	5.1	6.4
	50	3.9	5.9	6.1	7.7
	100	2.5	3.8	4.0	5.0
95°C	(10)'	(2.1)'	(3.1)'	(3.4)'	(4.2)'

RESISTANCE TO CHEMICALS

Polypropylene has high resistance to a large number of aggressive substances, and is therefore particularly suitable for special applications. The table below provides resistance of Polypropylene to various chemicals. For transport of combustible fluids, please comply with any legal regulations in force. Take care when the installation is to carry water with chlorine content over the limits permitted by law and/or contains elements which induce oxidation in general.

Symbols	+ highly resistant (+) resistant	0 fairly resistant (-) scarcely resistant	- not resistant sol.sat. saturated solution	T all% s it loses colour
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Examined substances %	Concentration 20 60 100	Temperature(°C)		
Acetone	100	+	0	
Acid (see acid name)				
Acetic acid	100	+	+	
Acetic anhydride	100	+		
Alum	sol. sat	+	+	
Aluminium salt	T	+	+	+
Amber acid	sol. sat.	+	+	
Ammonia gas	100	+	+	
Ammonia (liquid)	conc.	+	+	
Ammonia acetate	T	+	+	+
Ammonium nitrate	T	+	+	+
Ammonium phosphate	T	+	+	+
Ammonium sulphate	T	+	+	+
Aniline	100	+	(+)	
Antifreeze		+	+	
Apple juice		+	+	
Asphalt		+	0	
Aspirin		+		
Barium Chloride	T	+	+	+
Battery Acid		+	+	
Beer		+		
Benzaldehyde	100	+		
Benzaldehyde(liquid)	sol.sat.(0.3)	+		
Benzoid acid	100	+	+	
Benzol	100	(-)	-	
Benzoyl chloride	100	(-)	-	
Borax	sol. sat.	+	+	
Boric acid	100	+	+	
Bromine(liquid)	100	-		
Bromine dry steam	high conc.	-	-	
Bromine dry steam	low conc.	0	-	
Butane liquid	100	+		
Butane gas	100	(+)	+	
Butter	100	+	+	
Butyl alcohol		+	+	Butyl
Gas	100	(+)	+	
Calcium, chloride	sol. sat.	+	+	+
Calcium, nitrate	sol. sat.	+	+	
Carbon, tetrachloride	100	(-)	-	
Chlorine, liquid	100	-		
Chloride,dry gas	100	-	-	-
Chloride, wet gas	100	0	-	-

Examined substances	Concentration %	Temperature(°C)		
		20	60	100
Chloroform	100	+	0	
Chlorosulfonic, acid	100	-	-	-
Chromic, acid		+	0	
Chromium plating bath		+	+	
Chromium trioxide	sol. sat	+	-	
Coca Cola®		+		
Cocoa		+	+	(+)
Coffee		+	+	+
Copper, salt	sol. sat	+	+	+
Copper, nitrate 30%		+	+	+
Cream		+		
Cresol 100		+	0	
Cyclohexan	100	+		
Cyclohexanol	100	+	+	
Diesel oil		+	0	
Diethyl ether	100	0		
Dimethyl formamide	100	+		
Diossano	100	+	0	-
Dixan liquid		+	+	+
Dry salt		+	+	
Ethyl, acetate	100	0	0	
Ethyl, alcohol	100	+		
Ethyl, bebzol	100	0	-	
Ethyl, chloride	100	-		
Ethyl, hexanol	100	+		
Formaldehyde	40	+	+	
Formic, acid		+		
Fruit juice		+	+	
Gelatine		+	+	(+)
Gin 40		+		
Glycerine	100	+	+	
Glycerine, liquid	low conc.	+	+	+
Glycolic, acid	100	+	+	
Glucose		+	+	+
Heptane	100	(+)	+	
Hexane	100	+	0	
Hydrochloric, acid	high conc.	+	+	
Hydrochloric, acid	low conc.	+	+	
Hydrochloric, ammonium	T	+	+	+
Hydrogendioxide	10	+	+	
Iodine, tincture		+S		
Iron, salt	sol. sat.	+	+	+

Examined substances	Concentration %	Temperature(°C)		
		20	60	100
Iso octane	100	+	0	
Iso propylic alcohol	100	+	+	
Jam		+	+	(+)
Latic acid		+	+	
Lanolin		+	0	
Lemonades		+		
Lemon juice		+	+	
Liquors	T			
Magnesium, salt	sol. sat	+	+	+
Margarine		+	+	
Mayonnaise		+		
Menthol		+		
Mercury	100	+	+	
Methanol	100	+	+	
Methyl chloride	100	0		
Methyl-ethy-keton	100	+	0	
Milch		+	+	(+)
Muriatic, acid	10	+	+	
Mustard		+	+	
Nephtalene, decahydro	100	(-)	-	-
Naphtalene	100	+		
Naphthalene,trachloride	100	0	-	
Nitric, acid	10	(+)	-	-
Nickel, salt	sol. sat.	+	+	
Nitrobenzene	100	(+)	0	
Octane		+	0	
Oil	100	+	0	
Oil ether	100	+	0	
Oil of turpenthine		0		
Oleic, salt	100	+		
Oleum	T	-	-	-
Orange, juice		+	+	
Ozone	<0.5ppm.	(+)	(+)	
Oil:				
Almond oil		+	+	
Animal oil		+	(+)	(-)
Camphor oil		+	+	
Coconut oil		+	(+)	
Cod oil		+		
Cloves oil		+		
Com oil		+	0	
Linseed oil		+	+	
Motor oil		+	0	-
Olive oil		+	+	
Ocalic oil		+	+	+
Paraffin oil		+	0	-
Peppermint oil		+	+	
Rasin oil		+	(+)	
Silicone oil			+	(+)
Paraffin	100	+	+	-
Petroleum	100		+	
Pepper		+	+	
Perborax	sol.sat.(1.4)	+	+	+
Perfume		+		
Henol	sol. sat.	+	+	

Examined substances	Concentration %	Temperature(°C)		
		20	60	100
Phosphorus, acid	sol. sat.	+	0	
Phosphorus, oxichloride	100	0	-	-
Photographic acid		+	+	
Potassium Carbonate	sol. sat.	+	+	
Potassium Chlorate	sol.sat.(7.3)	+	+	
Potassium Chlorate	sol. sat.	+	+	
Potassium Chromate	sol.sat(12)	+	+	+
Potassium iodides	ol.sat.	+	+	
Potassium nitrate	sol. sat.	+	+	
Potassium permangan	sol.sat.(6.4)	+	(+)	
Potassium persulfate	sol.sat.(0.5)	+		
Potassium sulfate	sol. sat.	+	+	+
Propane gas	100	+	+	
Propane, liquid	100	+		
Pyridine	100	+	0	
Quinine		+		
Silver, salt	sol. sat.	+	+	
Soap liquid	10	+	+	+
Soda caustic	100	+	+	
Sodium bicarbonate	sol. sat.	+	+	+
Sodium carbonate	sol.sat.	+	+	
Sodium chlorate	25	+	+	
Sodium chloride	sol. sat.	+	+	+
Sodium hypochlorite	5	+	+	
Sodium nitrate	sol. sat.	+	+	
Sodium phosphate	sol. sat.	+	+	+
Sodium sulphate	sol. sat.	+	+	+
Sodium sulphite	sol. sat.	+	+	
Sodium thiosulphate	sol. sat.	+	+	
Starch	T	+	+	
Sulphure, carbon		0		
Tea		+	+	(+)
Tetra-chlorine-ethylen	100	0	-	
Tetraidrophurano	100	0	-	
Thiophene	100	0	-	
Tin II chloride	sol. sat.	+	+	
Toothpaste		+	+	
Trichlorethylene	100	0	(-)	
Tricresylphosphate		+		
Turpentine	100	-		
Urea	sol. sat.	+	+	
Vanilla		+	+	
Vaseline		+	0	
Vinegar		+	+	
Water:				
Boric water	sol. sat. (4.9)	+	+	
Brackish water		+	+	+
Chlorinated water	sol. sat.	0	-	
Distilled water	100	+	+	+
Drinking water		+	+	+
Lake water		+	+	+

STANDARDS	FIELDS
DIN 1998	Drinking water line installation
DIN2999	Whitworth pipe threads for tubes and fitting
DIN 4109	Sound insulation in building constructions
DIN 8077	Polypropylene (pp)pipes dimensions
DIN 8078	Polypropylene (pp)pipes general quality requirements and testing.
DIN 16962	Polypropylene (pp)pipes fitting
DIN 16928	Pipe connections and components-pipes of thermoplastic materials: pipe joints, element for pipe, laying: general directions.
DIN 16928(6-9)	Pipe joints and elements for polypropylene (pp) pressure pipelines, types 1 and 2; injection molded elbows for socket - welding, dimension.
DIN 16925.5	Pipe joins and elements for polypropylene (pp) for pipes under, -part 5; general quality
DIN 2207.11	Welding regulations for plastic pipes.
DVS 2203	Test of thermoplastic pipe fitting for weld
DVS 2208.1	Machines and devices for welding thermoplastic pipes.
EN ISO 1587 4(1-7)	Plastic piping systems for hot cold water installations polyprppyene(pp)
IS 15801 :2008 BIS	BUREAU OF INDIAN STANDARDS

Testing

- We have well equipped in house testing facility for the control of quality by
- Testing of incoming Raw material.
 - Final inspection and dispatch.
 - Inspection and testing during production as per standards.
 - Periodical calibration of testing equipments

PROPERTIES	PP-R	GI	COPPER	HDPE	CPVC
Service life(years)	50 Years plus	10 Years	10 - 25 Years	20 - 30 Years	20 - 30 Years
Temperature Resistance	Very Good	Excellent	Excellent	Good	Good
Food grade	Excellent, Hygienic	Non - Hygienic	Non - Hygienic	Good	Non - Hygienic
Heat Loss	Negligible	Very High	Very High	Moderate	Moderate
Chemical Resistance	Excellent	Very Weak	Weak	Good	Good
Maximum safe working temp 'c'	99	High	High	80	80
Ease of Repair/maintenance	Easy/Nil	Huge Cost	Huge cost	Easy/Nil	Easy/Nil
Corrosion/ Abrasion Resistance	Excellent	Very low	Very low	Good	Moderate
Friction Factor	Very Low	High	High	Low	Low
Reliability	Very Good	Poor	ok/Expensive	Average	Average
Joint Reliability/Leak proof (Max:100, min:0)	99	80	80	60	70
Joining Method	Heat Fusion	Heat Fusion	Brazing	Butt Fusion	Special Solvent Chemical
Joining Skill	Very simple & can be done by unskilled labour	needs skilled labour	Needs Skilled Labour	Needs Skilled Labour	Needs Special by attention & Skilled Labour
Joining life commissioning	Immediate	24 hours	24 hours	Few Hrs	24 hours
Easiness in fittings	Very Easy	difficult	difficult	Easy	Easy
Laying(Easiest= 100 & Hardest=0)	100	0 - 50	0 - 50	0 - 80	0-80

TESTING EQUIPMENT & QUALITY CONTROL

1 Density	Weighing Balance	6.2.1 & 9.5	IS: 15801/2008 IS:13360(Part 3/section 1 IS: 12235 (Part 14)	This test is carried out to know the density of pipe, specially for green pipe which are used in hot and cold water supply. Density should be 900 to 910 kg/m ³
2 M.F.R	M.F.I Machine	6.2.2	IS: 15801/2008 IS:13360 (Part 4 section 1)	This test is carried out to know the melt ow rate of Material used in manufacturing of pipe. M.F.R Value should be Less or equal to 0.5 GM /1 0 Minutes
3 Visual appearance	Manually	8	IS :15801/2008	This test is carried out to know the Visual appearance of pipe It includes smooth and clean internal and external surface of pipe as well as square cutting of pipe ends
4 Reversion test	Hot air Oven	9.3	IS:15801 /2008 IS :12235 (Part 5/section 1)	This test is carried out to know the longitudinal reversion of pipe . Its value shall not be more then 2%
5 Fusion Compatibility	Hydrostatic Machine & Hot water bath	9.1 & 9.2 TABLE 3 Serial no. (iii)	IS: 15801/2008	This test is carried out to know about fusion strength of pipe and fittings to bear the hydraulic characteristic in accordance 9.1 & TABLE 3 Serial No (iii)
6 Thermal Stability	Hydrostatic Machine & Hot air Oven	9.8	IS 15801 :2008 IS 12235:Part 8/Section (1)	This test is carried out under high temperature and pressure of water or air for 8760 hours . The Outer medium shall not burst during the test period
7 Opacity Tester	Opacity Tester	9.9	IS 15801 :2008 IS 12235 (Part 3)	This test is carried out to know the percentage of visible light transmit through plain surface of pipe . Its value should not more than 2 %
8 Impact test	Charpy Impact Testing machine	9 & Annex b	IS 15801:2008	This test is carried out to know the internal hydrostatic pressure applied by fluid under specific temperature and pressure
9 Hydraulic characteristic (Internal creep rupture)	Hydrostatic Machine	9.1	IS 15801:2008 IS :10910 IS: 9845	This test is carried out to know the internal hydrostatic pressure applied by fluid under specific temperature and pressure
10 Influence Of water For Human consumption	Hot air Oven & Hot Plate	6.6	IS 15801 : 2008	This test is carried out the effect of pipe material on fluid owing inside pipe . It shall not adversely effect the quality of drinking water
11 Outsider Diameter and Ovality	vernier Caliper and pie tape	7.1 & 7.3.2 table 1	IS15801: 2008	This test is carried out to know the specific outside diameter and ovality of pipe as per standard
12 Wall Thickness	Micrometer	7.2 & 7.3.1 Table 2	IS15801: 2008	This test is carried out to know the specific wall thickness of pipe as per standard
13 Length of straight pipe	Measuring tape	7.4	ISI5801:2008	This test is carried out to know the specific length of pipe as per standard

KPT is having in-house testing facility to do above tests as per the BIS standard.

PN- 25 FITTINGS



90° ELBOW

Dimension		
20mm	50mm	110mm
25mm	63mm	160mm
32mm	75mm	
40mm	90mm	



COUPLER

Dimension		
20mm	50mm	110mm
25mm	63mm	160mm
32mm	75mm	
40mm	90mm	



END CAP

Dimension		
20mm	50mm	110mm
25mm	63mm	160mm
32mm	75mm	
40mm	90mm	



TEE

Dimension		
20mm	50mm	110mm
25mm	63mm	160mm
32mm	75mm	
40mm	90mm	



45° ELBOW

Dimension		
20mm	50mm	110mm
25mm	63mm	160mm
32mm	75mm	
40mm	90mm	



REDUCING TEE

Dimension		
25/20mm	75/40mm	50/40mm110/20mm
32/20mm	75/50mm	63/20mm110/25mm
32/25mm	75/63mm	63/25mm110/32mm
40/20mm	90/20mm	63/32mm110/40mm
40/25mm	90/25mm	63/40mm110/50mm
40/32mm	90/32mm	63/50mm110/63mm
50/20mm	90/50mm	75/20mm110/75mm
50/25mm	90/63mm	75/25mm110/90mm
50/32mm	90/75mm	75/32mm160/110mm



CROSS

Dimension	
20mm	40mm
25mm	50mm
32mm	63mm



PP-R UNION

Dimension	
20mm	40mm
25mm	50mm
32mm	63mm



PIPE CLAMP

Dimension	
20mm	40mm
25mm	50mm
32mm	63mm



REDUCER

Dimension		
25/20mm	75/40mm	50/40mm110/20mm
32/20mm	75/50mm	63/20mm110/25mm
32/25mm	75/63mm	63/25mm110/32mm
40/20mm	90/20mm	63/32mm110/40mm
40/25mm	90/25mm	63/40mm110/50mm
40/32mm	90/32mm	63/50mm110/63mm
50/20mm	90/50mm	75/20mm110/75mm
50/25mm	90/63mm	75/25mm110/90mm
50/32mm	90/75mm	75/32mm160/110mm



REDUCING ELBOW

Dimension	
25/20mm	40/32mm
32/20mm	50/40mm
32/25mm	



PIPE PLUG

Dimension	
20mm	25mm
32mm	40mm



FE- THREADED COUPLING

Dimension		
20 x 1/2"	2 x 3/4"	75 x 2-1/2"
20 x 3/4"	32 x 1"	90 x 3"
25 x 1/2"	40 x 1-1/4"	110 x 4"
25 x 3/4"	50 x 1-1/2"	
32 x 1/2"	63 x 2"	



MALE THREADED COUPLING

Dimension	
20 x 1/2"	32 x 3/4"
20 x 3/4"	32 x 1"
25 x 1/2"	
25 x 3/4"	
32 x 1/2"	



BALL VALVE

Dimension	
20mm	63mm
25mm	75mm
32mm	90 mm
40mm	110mm
50mm	



FEMALE THREADED TEE

Dimension		
20 x 1/2"	32 x 1"	63 x 3/4"
25 x 1/2"	40 x 3/4"	
25 x 3/4"	40 x 1-1/4"	
32 x 1/2"	50 x 3/4"	
32 x 3/4"	50 x 1-1/2"	



MALE THREADED TEE

Dimension	
20 x 1/2"	32 x 3/4"
25 x 1/2"	32 x 1"
25 x 3/4"	40 x 3/4"
32 x 1/2"	40 x 1-1/4"



MALE THREADED ELBOW

Dimension	
20 x 1/2"	32 x 3/4"
25 x 1/2"	32 x 1"
25 x 3/4"	40 x 1-1/4"
32 x 1/2"	50 x 1/2"



FEMALE THREADED ELBOW

Dimension	
20 x 1/2"	32 x 3/4"
25 x 1/2"	32 x 1"
25 x 3/4"	40 x 1-1/4"
32 x 1/2"	50 x 1-1/2"



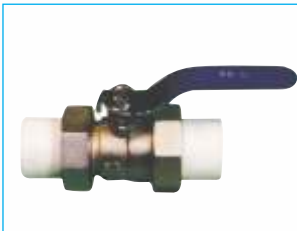
FEMALE THREADED UNION

Dimension	
20X1/2"	40x 1-1/4"
25 X3/4"	50 X 1-1/2"
32x 1"	63 X 2"



MALE THREADED UNION

Dimension	
20 x 1/2"	50 x 1-1/2"
25 x 3/4"	63 x 2"
32 x 1"	
40 x 1-1/4"	



DOUBLE UNION BALL VALVE

Dimension	
20mm	50mm
25mm	63mm
32mm	
40mm	



STOP VALVE F/ HANDLE

Dimension	
20mm	40mm
25mm	50mm
32mm	63mm



PPR FLANGE CORE

Dimension	
32	75
40	90
50	110
63	160



WELD SADDLE

Dimension	
50/20	63/32
63/20	75/32
75/20	75/32
110/20	90/32
110/20	110/32
50/32	



HOLE REPAIR DIE

11
07



HOLE REPAIR BAR

Dimension	
7 X 11	



PPR FLANGE

Dimension	
32	75
40	90
50	110
63	160



WELDING DEVICE

Dimension	
20MM to 32MM	



WELDING DEVICE

Dimension	
20MM to 63MM	



WELDING DEVICE

Dimension	
75MM to 110MM & 160MM	



PIPE CUTIER

Dimension	
20-40	

FUSION METHOD

The process of joining PPR-C pipes and fittings is very simple and results in inseparable watertight joints. It is carried out using a simple welding machine that fuses the internal surface of the fitting and the external surface of the pipe, so that the material of the pipe and the fitting will be bonded together.

THE FOLLOWING DESCRIBE THE STEPS OF THE WELDING PROCESS

Prepare the welding machine by fitting it with the welding dies of the diameters to be welded. Connect the plug to the 220V power supply socket and wait until the green light on the machine goes out indicating the welding machine has reached the working temperature.

- Cut the pipe at right angles to the pipe axis using suitable pipe cutter.
- Remove any burrs or cutting chips by deburring the cutting area.
- Mark the welding depth on the pipe using suitable marker.
- Insert the end of the pipe without turning into the heating sleeve up to the marked welding depth and at the same time slide the fitting without turning into the other side of the heating tool up to the stop. It is essential to observe the mentioned heating times (refer to the below table)
- Leave the pipe and fitting into the heating tool until the heating time is elapsed.
- At the end of the heating time, remove the pipe and fitting from the heating tool and push them immediately against each other up to the mark indicating the welding depth. At this stage the depth mark will be covered with the welding bead.
- During this process, do not rotate the pipe and fitting relative to each other.
- Allow the joint to cool fully before using.

STEP 01



STEP 02



RESULT



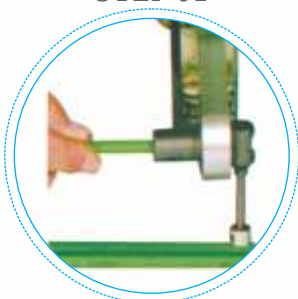
HOLE REPAIRING

If a hole is accidentally made in the pipe (with a drill bit or screws) and if the hole is in on ly one side of the pipe, it can be repaired using the hole repairing die, bearing in mind that the pipe size must be compatible with the die diameter.

THE REPAIR PROCEDURE IS AS FOLLOWS:

- Clean and dry the part to be repaired.
- Fit the male part of the Hole repairing die into the hole; it must melt the surface to be adjusted by the operator to suit the pipe thickness, to ensure that the die cannot be inserted too far and melt the other side of the pipe. To make this adjustment, undo the screw which fixes the bush and then move it along the die.
- At same time as the male part of the die melts the area around the hole, the female part melts the repair bar usually supplied with die. Once the heating time has passed (5sec.) the repair bar must be inserted in the hole. When this operation is complete, wait for everything to cool and then cut of the excess part of the repair bar.
- If the diameter of the hole to be repaired is greater that of the die, or both sides of the pipe are punctured, the piece of pipe must be cut out and the repair made using normal pipe fittings.

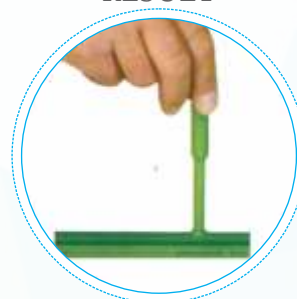
STEP 01



STEP 02



RESULT



FUSION TECHNIQUE II

WELD-IN SADDLE TECHNIQUE

Branches can easily be made by weld-in saddles, even at a later stage of installation. By using weld-in saddles you save material and time. Whereas in case of tees three joints have to be welded, installation of saddle is restricted to mounting the saddle and branch pipe only.

Steps Follows

- Drill the pipe
- Warm up the saddle
- Pipe wall and outside pipe
- Connect the elements

STEP 01



STEP 02



RESULT



ADVANCED BUTT WELDING TECHNOLOGY

KPT is having advanced Italian Make Ritmo Butt welding machine to do butt welding joints for 110 mm and 160 mm pipes. Internationally Butt welding is acceptable for the size above 110 mm to join PPR-C pipes instead of coupling joints. To adhere international quality standard.

STEP 01



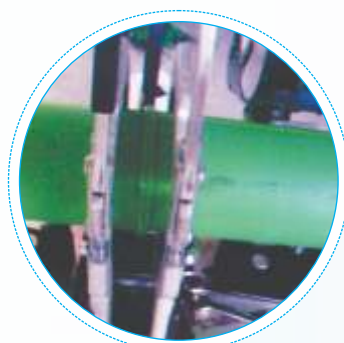
STEP 02



STEP 03



RESULT



PNEUMATIC PIPES

PNEUMATIC AND COMPRESSED AIR PLUMBING PIPING SYSTEM

"KPT ZEPHYR" pipes are made from the finest raw material's on this planet. The three layers of the pipe distinguish its uniqueness for the application and its benefits over other products. The main advantage of KPT Zyphyr pipes is that it's middle layer consists of Glass Fiber composite material which makes it ideal for usages for Air and various other applications as there is no sagging even after prolonged working hours, ensuring everlasting performance with complete satisfaction and full value for money. Most of the industries are now slowly moving away from MS/GI piping system for compressed air transportation owing to following problems:

- **Leak in joints** - in welded or threaded joints.
- **Rusting** - Water condensation in compressed air system leads to rust formation even in joint areas of GI pipe welding, affecting costlier pneumatic equipments.
- **Installation Time** - Both threaded and welded systems consume more time in existing repair work as well as in new projects.
- **Pressure Drop** - Rough inner surface in the above pipes leads to slight increase in pressure drop.
- **Cost** - Aluminium piping system is more expensive than GI/MS pipes.
- **Atmospheric effects** - Aluminium also reacts with most of the chemicals. If some chemicals are present in compressed air, that can equally affect aluminium pipes.
- Often aluminium pipes are available at the maximum size of 110 mm only.
- Most of the fittings are in Plastic material. These areas are then rendered mechanically weaker in the line.

KPT pneumato PPR piping system (Sky Blue Colour) will provide the right solution for all the above issues. KPT select PN 12 Rating PPR pipes for compressed air application has the following features:

- PPR piping joints are fusion joints and no external adhesives are used. Hence once fusion welding is done, pipes and fittings will turn into a homogeneous material and makes a permanent joint.
- PPR is a cost effective solution as compared to Aluminium Pipes. Upto 1.5", PPR pipe prices are at par with GI C class pipes.
- Fusion welding technology is very simple. Any person can do it with little practice. KPT will offer training and provide minimum spares to our clients to meet any emergency.
- PPR pipes have resistance to most of the chemicals. Hence, it can withstand any atmospheric condition.
- Inner surface of PPR pipes is on par with Aluminium Pipes.
- We can transport a little more air through PPR pipes.



ADVANTAGES

- Non Corrosive product
 - 100% leak proof
 - Low pressure drop
- Glass insulation & Low Thermal conductivity
 - Low maintenance & energy efficient
 - Low friction



MONO & TRIPLE LAYER | FLAME RETARDANT | PN 6 TO PN 20 RANGE

Nominal diameter	Approx. Wall Thickness (Minimum and Maximum)						Total Wall Thickness			Inner Diameter (I D)		
	SDR 11		SDR 7.4		SDR6		SDR 11	SDR 7.4	SDR6	SDR 11	SDR 7.4	SDR 6
	PN 10		PN 16		PN 20		PN 10	PN 16	PN 20	PN 10	PN 16	PN 20
	MIN	MAX	MIN	MAX	MIN	MAX						
DN(OD)												
20	NA	NA	2.80	3.30	3.40	4.00	NA	6.10	7.40	NA	13.90	12.60
25	NA	NA	3.50	4.10	4.20	4.90	NA	7.60	9.10	NA	17.40	15.90
32	NA	NA	4.40	5.10	5.40	6.20	NA	9.50	11.60	NA	22.50	20.40
40	NA	NA	5.50	6.30	6.70	7.60	NA	11.60	14.30	NA	28.20	25.70
50	NA	NA	6.90	7.80	8.30	9.40	NA	14.70	17.70	NA	35.30	32.30
63	NA	NA	8.60	9.70	10.50	11.60	NA	18.30	22.30	NA	44.70	40.70
75	6.80	7.70	10.30	11.60	12.50	14.00	14.50	21.90	26.50	6.50	53.10	48.50
90	8.20	9.30	12.30	13.80	15.00	16.70	17.50	26.10	31.70	72.50	63.90	58.30
110	10.00	11.20	15.10	16.90	18.30	20.40	21.20	32.00	38.70	88.80	78.00	71.30
125	11.40	12.60	17.10	19.10	20.80	23.10	24.20	36.20	43.90	100.80	88.60	81.10
140	12.70	14.20	19.20	21.40	23.30	25.90	26.90	40.60	49.20	113.10	99.40	90.80
160	14.60	16.30	21.90	24.30	26.60	29.50	30.90	46.20	58.10	129.10	113.60	103.90



APPLICATIONS



Connection
Heating & Cooling



Chilled Water
Technology



Swimming-pool
Technology



Wall Heating



Application In The
Field of Ship Building



District Heating
Pipeline Systems



Chemical
Transport



Irrigation



Geothermal



THERMAL FR COMPOSITE PIPES

A brand new innovation from the house of KPT, we proudly introduce KPT Thermaplus PPR pipes and fittings plumbing system for fire fighting lines and various other applications. The outer layer of the pipes is being made of flame retardant material which can easily withstand flames for more than half an hour ensuring safe passage for the public at large. This plumbing system is ideal for all kinds of Hotels, Malls, Industries, Schools, Residential Apartments etc.



Thermal FR Composite Piping is preferably advisable to use in highly corrosive chemicals, higher and lower temperature applications as well as all types of process and utility applications, soft water, raw water, R.O water, D.M water etc. Thermal FR Pipes and Thermal Fittings are having lot of advantages which can overcome the issues like leakages, pressure drop and corrosion – erosion in Metal Piping. Those are as under:

Leak proof Joining System: THERMAL FR COMPOSIT PIPES AND FITTINGS provides leak proof joining throughout the life of pipes and fittings, because the joining system used in THERMAL FR COMPOSITE PIPES AND FITTINGS is socket fusion welding where the outer diameter of the pipe and the inner diameter of fitting are heated and the joint is made. And there are two main advantages of this joining system, firstly the leak proof joining is created and secondly there is no ring created in the pipe which prevents scaling in the piping, wherein metal pipe; there is a threaded type of joint which creates leakages and increases the chances of scaling in the pipe. And in case of any plastic pipe; the joining system used is the Butt Welding where there is a ring created inside the pipe which will act like a barrier to any fluid or chemical which passes in the pipes and it also causes scaling in the pipes.

Non Corrosive & Rust Free Pipe: THERMAL FR COMPOSIT PIPES AND FITTINGS is a non-metallic technology for industrial application. Generally industries use traditional metal piping system where they face huge problem of corrosion and rust as there was no other option which was later a cause for creation of leakage in the piping system but

with THERMAL FR COMPOSITE PIPES AND FITTINGS; you can have rust and leak proof piping.

No temperature loss and minimum insulation: One of the major problems faced by any industrial user is the temperature loss. Many applications in which it becomes necessary to maintain the temperature; companies face problem of temperature loss and sweating from the piping in metal and any plastic pipes and that forces them to have a thick insulation which is very expensive and also maintenance leading. But with Sandwich Glass Fiber Technology in THERMAL FR COMPOSITE PIPES AND FITTINGS; there is no temperature loss, as the THERMAL CONDUCTIVITY in THERMAL FR COMPOSITE PIPES AND FITTINGS is 0.024 Btu/hr ft°F, which is 1700 times lesser compare to metal pipes and 11 times lesser compared to any plastic pipes. So the middle GLASS FIBER layer acts as insulation to the pipe. Hence, it requires minimum insulation.

Smoother inner surface with better flow & no scope of scaling: The roughness is calculated in terms of the RA Value and the RA Value of THERMAL FR COMPOSIT PIPES AND FITTINGS is 0.07 Micron which is very much lesser compared to any metal pipes. And with higher RA Value there is more friction in the piping and hence in any metal piping there is lot of friction which affects the flow in the piping and it also creates scaling but THERMAL FR COMPOSIT PIPES AND FITTINGS have smoother inner surface so there is no chance of friction and it gives very easy and smooth flow in the piping. Moreover there is no possibility of scaling in our piping.

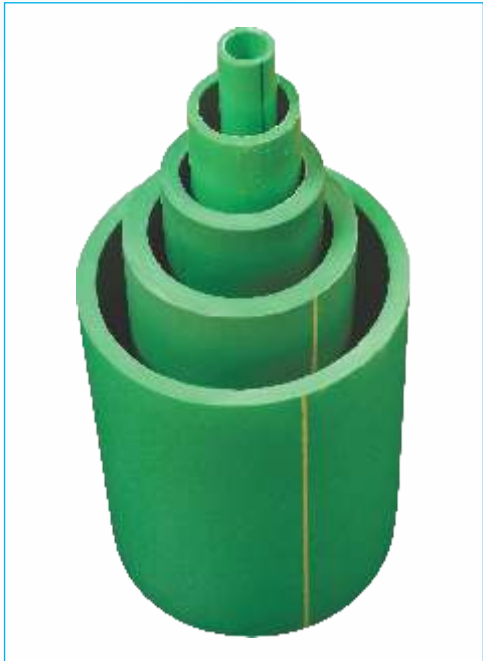


Thermal FR Composite Piping

Mono & Triple layer | Flame Retardant | PN 6 to PN 20 range

ADVANTAGES

- Low thermal conductivity
- Less insulation required
- Low maintenance
- Low friction & energy loss
- Low sagging due to glass fiber enforcement
- More joint strength



CRITERIA	THERMAL FR COMPOSITE PIPING	PPR PLUMBING PIPING
Thermal Conductivity	Lowest Thermal Conductivity 0.013 Btu/hr leading to Negligible Heat Loss	Higher Thermal Conductivity 0.066 Btu/hr leading to higher Heat Loss
Friction Loss related to RA Value	Least RA Value i.e. 0.07 Micron prevent Friction Loss in the pipeline	0.4 Micron RA Value leads to higher Friction Loss in the pipeline
Insulation	Sandwich Glass Fiber Reinforcement layer increases the temperature withstand capacity; in turn requires lesser insulation to prevent sweating	Owing to Plastic material, requires very thick insulation to prevent sweating and heat loss
Thermal Expansion	Very less Thermal Expansion because of Sandwich Glass Fiber Reinforcement Layer	Very high Thermal Expansion having Random Co Polymer compared to all polymers
Maintenance	NIL Maintenance having benefits such as Least Thermal Expansion and Sagging	High chances of Maintenance because of higher Thermal Expansion leading to sagging as well as Insulation

APPLICATIONS



potable water application



application in the field ship building



connection heating and cooling



district heating pipeline systems



swimming-pool technology



chilled water technology



chemical transport



ceiling heating and cooling

TURNKEY SOLUTIONS & SERVICES:

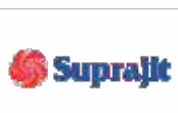
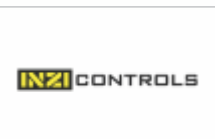
We provide integrated turnkey flow solutions that you need to succeed. We can help you solve your challenging flow applications to improve process efficiency, reduce maintenance expenses/downtime and ensure safe operations of your fluid flow systems. We have the product and the process application knowledge & experience to maximize your process uptime at the lowest total cost of ownership.

INSTALLATION PHOTOS





SOME OF OUR PRESTIGIOUS CLIENTS



KANHA PLASTICS PVT. LTD.

Manufacturer and Exporters of Commercial & Industrial PPR Pipes & Fittings

AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY



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