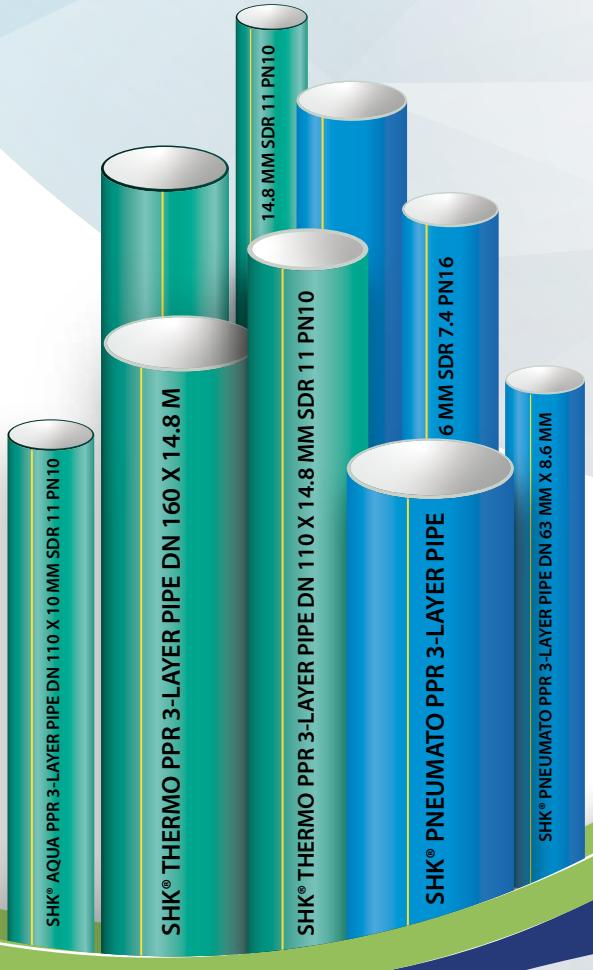
SHK®

PPR Pipes & Fittings

MOST EFFICIENT PIPING SYSTEM



ISO 9001 - 2015 certified company

WRAS APPROVED MATERIAL

CBRI

cftri Giving Food a Future

IS15801 CM/L-7200068512

CIPET

MAKE IN INDIA

Shreeharikrishna Group

www.shreeharikrishna.net

COMPANY PROFILE

This is an era of transforming our utilization by using the most efficient products. So, with an aim of providing more sustainability in the field of pipes and fittings which plays a very vital role in the quality & safety purpose, SHK POLYMER INDUSTRIES, a trustable brand and a leading Manufacturer of PPR-C Pipes & Fittings and HDPE Pipes & Fittings, are here to provide you the best manufactured pipes using the Raw Material procured from the most reliable sources in the world.

SHK Polymers Industries is an ISO 9001-2008 certified company having an experience of more than 40 years. We provide a wide range of PPR-C pipes in terms of Size (16 mm to 400 mm) and in terms of Pressure (PN 6 to PN 20) as per IS- 15801:2008 and all the Fittings are manufactured as per DIN 15962. SHK Polymers Industries has a phenomenal Manufacturing Facility for PPR-C Pipes & Fittings which are currently the best replacement of any kind of pipes for Hot/Cold Water Supply, Compressed Air, Chemical Supply & Clean Water Supply.

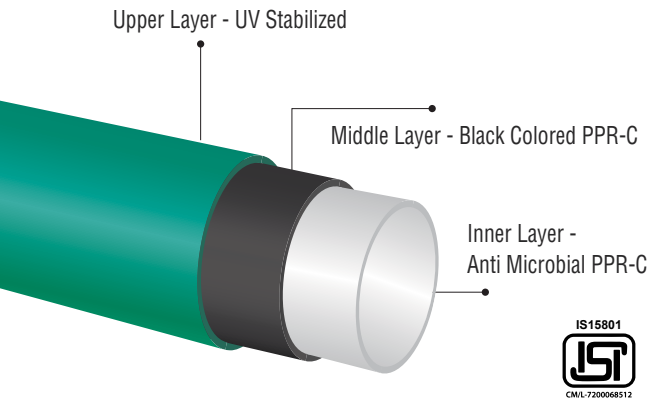
SHK Polymers Industries are also into the manufacturing of HDPE Pipes which are quite in demand for Water Supply, Effluent Supply, Drainage applications, Chemicals Supply & Casing over Electrical Cables. SHK HDPE Pipes are according to the standards of IS 4984 sizing from 20 mm to 450 mm in all the grades and Pressure Ratings mentioned in Indian Standards.

Infrastructure

We have with us well developed infrastructure facilities that include advanced technology based machinery and a Specialized Research & Development Unit. We have Multiple Extrusion and Injection Moulding Units for PPR-C and HDPE Pipes & Fittings. This helps us to achieve columinous and qualitative production. Our plant is equipped with the most sophisticated & advance machineries to manufacture the products confirming to the standards laid down by Indian and International standard requirements and well equipped with in-house Testing & Quality Assurance Facilities.

SHK PPR-C PIPES

SHK® Aqua
Triple Layer PPR-C Pipes & Fittings



IS15801
CM/L-7200068512

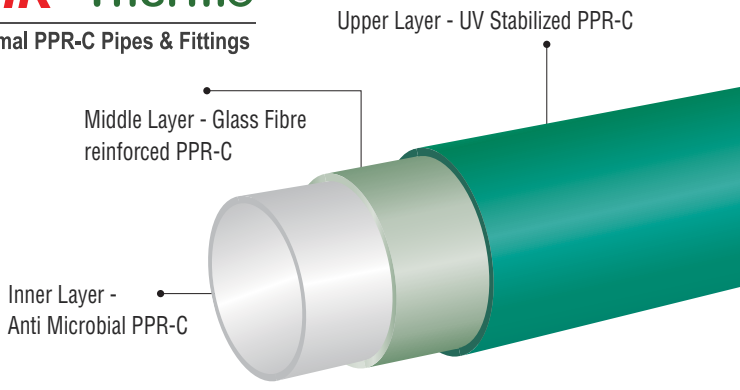
Anti-microbial PPR-C Inner Layer

Anti-Microbial Layer Prevents the growth of Bacteria/Algae/Microbes etc inside the pipe which makes suitable for the Usage of any Clean Water or Liquid Food Supply Application.

UV Stabilized PPR-C Top layer:

1. UV Stabilizers contains various chemical properties, which gives the protection against UV light by various chemical mechanisms.
2. Colors like Black, Green already have good resistance to UV rays, but addition of UV stabilizers further enhance the light and
3. thermal stability of product.
4. UV stabilizers impart long term durability and enhance life of the product.

SHK® Thermo
Thermal PPR-C Pipes & Fittings



Properties

- Wide Operating Temperature range: (-8) to 95 Degree Celsius
- Lighter in Weight
- Longer Service Life
- Leak Proof (Socket-Fusion Jointing)
- Non-Scaling
- Very low Thermal Conductivity (0.23 W/mK)
- Very Low Frictional Factor (1.5 Ft / 100 Ft)
- No Electrical Conductivity
- Anti-Corrosive
- Good Chemical Resistance
- Negligible Heat Loss
- Low Laying Time
- Recyclable Material

Fields of Application

- Hot/Cold Water Supply
- Chemical Plants
- Cooling Towers & Condensor Lines
- Chilled Water Supply
- Pharmaceutical Industries (USFDA Approved)
- Effluent/ Water/Sewage Treatment Plants
- RO Drinking Water Plant
- Solar Water Heater
- Fire Application

Available Colors

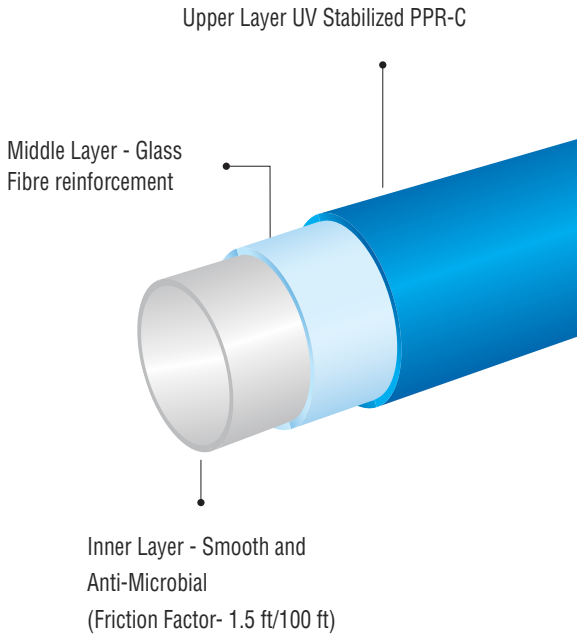
SHK Flame Retardant Pipes

The Outer-most Layer of PPR-C pipes is added with Flame Retardant Additives like UL94 to get protection against the fire and helps to stop the flame within some seconds.

SHK® Pneumato
Pneumatic PPR-C Pipes & Fittings

UL 94 FLAME RETARDANT CHARACTERISTIC

TEST CRITERIA	UL94 (TESTING AS PER IEC 60707)
Burning time of each individual test specimen (s) (after first and second flame applications)	≤30
Total burning time (s) (10 flame applications)	≤250
Burning and afterglow times after second flame application (s)	≤60
Dripping of burning specimens (ignition of cotton batting)	Yes
Combustion up to holding clamp (specimens completely burned)	No



Application

- Compressed Air
- Instrument Air
- Vacuum Air
- Nitrogen Air





Available Colors

MOST ENERGY SAVING PIPES FOR ALL AIR APPLICATIONS

STANDARD SIZES OF PPR-C WITH WALL THICKNESS

SHK PPR-C Pipes are ISI approved following the IS: 15801:2008. Below is the thickness requirements as per standards of Sizes and Pressure Ratings.

OUTER DIAMETER	MS PIPE SIZING	SIZE DETAILS ACCORDING TO INCH	SDR11/PN10			SDR7.4/PN16			SDR6/PN20		
			THICKNESS	INNER DIAMETER	KG/Meter	THICKNESS	INNER DIAMETER	KG/Meter	THICKNESS	INNER DIAMETER	KG/Meter
20	15 MM	1/2"	1.9	16.2	0.107	2.8	14.4	0.148	3.4	13.2	0.172
25	20 MM	3/4"	2.3	20.4	0.164	3.5	18	0.230	4.2	16.6	0.266
32	25 MM	1"	2.9	26.2	0.261	4.4	23.2	0.370	5.4	21.2	0.434
40	32 MM	1 1/4"	3.7	32.6	0.412	5.5	29	0.575	6.7	26.6	0.671
50	40 MM	1 1/2"	4.6	40.8	0.638	6.9	36.2	0.896	8.3	33.4	1.040
63	50 MM	2"	5.8	51.4	1.010	8.6	45.8	1.410	10.5	42	1.650
75	65 MM	2 1/2"	6.8	61.4	1.410	10.3	54.4	2.010	12.5	50	2.340
90	80 MM	3"	8.2	73.6	2.030	12.3	65.4	2.870	15	60	3.360
110	100 MM	4"	10	90	3.010	15.1	79.8	4.300	18.3	73.4	5.010
160	150 MM	6"	14.6	130.8	6.380	21.9	116.2	9.040	26.6	106.8	10.600
200	200 MM	8"	18.2	163.6	9.920	27.4	145.2	14.180	34	132	17.150

OUTER DIAMETER	MS PIPE SIZING	SIZE ACCORDING TO INCHES	SDR17/PN6			SDR13.6/PN8			SDR11/PN10		
200	200 MM	8"	11.4	177.6	7.05	14.7	170.6	8.27			
250	250 MM	10"	14.2	221.6	10.940	18.4	213.2	13.300	22.7	204.6	15.528
315	300 MM	12"	17.9	279.2	17.572	23.3	268.4	21.190	28.6	257.8	24.683
400	350 MM	16"	23.5	353	28.060						

Note : SDR Means Standard Dimensional Ratio which is THE RATIO OF OUTER DIAMETER WITH THE THICKNESS OF THE PIPES.





TECHNICAL PROPERTIES

Thermal Properties

Properties	Test Method	Unit	Value
Thermal Conductivity at 23 C	DIN 52612	W/m^{0k}	0.23
Specific heat at 23 C	Calorimeter	Kj/kg^{0K}	1.73
Coefficient of linear thermal expansion	DIN 53752	K^{-1}	1.5×10^{-4}
Under weight deformation temperature 1.8 N/mm2	ISO 306	^0C	44
0.45 N/ mm2	ISO 3146	^0C	42
VICAT softening point	0.095	^0C	130

Mechanical Properties

Properties		Test Method	Unit	Value
Tensile Stress at Yield (50mm / minute)		ISO 527-1,2	MPa	24
Tensile Stress at Yield (50mm / minute)		ISO 527-1,2	%	10
Tensile modules (secant)		ISO 527-1,2	MPa	850
Flexural Modulus		ASTM D 790	MPa	850
Tear Strength		ISO 527	MPa	40
Elongation at tear		ISO 527	%	800
Shore D Hardness		DIN 53 505	-	65
Pipe Friction Factor		-	-	0.007
CHARPY Impact Strength	23^0C	ISO 179/leA	KJ/m^2	22
	0^0C	ISO 179/leA	KJ/m^2	4.0
	-30^0C	ISO 179/leA	KJ/m^2	2.5
CHARPY Impact Strength (unnotched)	23^0C	ISO 179/leA	KJ/m^2	No failure
	0^0C	ISO 179/leA	KJ/m^2	No failure
	-30^0C	ISO 179/leA	KJ/m^2	43

Physical Properties

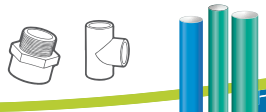
Properties	Test Method	Unit	Value
Density	ASTM D792	G/CM^3	0.91
Melt Flow Index	-	-	-
MFi 190 C / 5 kg	ASTM D1238	G/10 MINUTES	0.4
MFi 230 C / 2.16 kg	ISO R 1133	G/10 MINUTES	0.2
MFi 230 C / 5 kg	DIN 53 735	G/10 MINUTES	0.6

SUPPORT DISTANCE CHART FOR PPR-C TRIPLE LAYER PIPES

Outside Diameter of Pipe (mm)	Temperature In Degree - Support in Cms					
	20	30	40	50	60	70
20	80	75	70	70	65	60
25	85	85	85	80	75	70
32	100	95	95	90	85	75
40	110	110	105	100	95	85
50	125	120	115	110	105	90
63	140	135	130	125	120	105
75	155	150	145	135	130	115
90	170	165	160	155	150	145
110	190	185	180	175	160	165
160	200	200	200	195	180	175
200	225	225	225	225	210	200
250	245	245	245	245	235	235
315	275	275	275	275	265	250
400	295	295	295	295	280	265

"SHK" PPR-C PIPE SELECTION CHART (CFM Vs. PIPE DIA Vs. LENGTH)

	LENGTH									
FLOW RATE	164 FT	328 FT	429 FT	984 FT	1640 FT	2460 FT	3280 FT	4265 FT	5249 FT	6562 FT
CFM	50 Mtr.	100 Mtr.	150 Mtr.	300 Mtr.	500 Mtr.	750 Mtr.	1000 Mtr.	1300 Mtr.	1600 Mtr.	2000 Mtr.
8	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	1"
18	3/4"	3/4"	3/4"	1"	1"	11/4"	11/4"	11/4"	11/4"	11/4"
29	3/4"	3/4"	1"	1"	1"	11/4"	11/4"	11/4"	11/2"	11/2"
49	1"	11/4"	11/4"	11/4"	11/4"	11/2"	11/2"	11/2"	2"	2"
59	11/4"	11/4"	11/4"	11/2"	11/2"	11/2"	11/2"	11/2"	2"	2"
88	11/4"	11/2"	11/2"	11/2"	2"	2"	2"	2"	21/2"	21/2"
147	2"	2"	2"	2"	21/2"	21/2"	21/2"	21/2"	21/2"	21/2"
206	2'	2"	2"	2"	21/2"	21/2"	21/2"	3"	3"	3"
294	21/2"	21/2"	21/2"	21/2"	21/2"	3"	3"	3"	3"	3"
441	21/2"	21/2"	21/2"	3"	3"	3"	3"	4"	4"	4"
589	21/2"	21/2"	3"	3"	3"	4"	4"	4"	4"	4"
883	3"	3"	3"	4"	4"	4"	4"	6"	6"	6"
1030	3"	3"	3"	4"	4"	4"	4"	6"	6"	6"
1766	4"	4"	4"	4"	6"	6"	6"	6"	6"	6"



ALLOWABLE WORKING PRESSURE FOR PPR

Temperature in C	Years of Service	SDR 11 / PN 10	SDR 7.4 / PN 16	SDR 6 / PN 20
10	1	21.1	33.4	42.1
	5	19.8	31.5	39.7
	10	19.3	30.7	38.6
	25	18.7	29.7	37.4
	50	18.2	28.9	36.4
	100	17.8	28.2	35.5
20	1	18.0	28.5	35.9
	5	16.9	26.8	33.7
	10	16.4	26.1	32.8
	25	15.9	25.2	31.7
	50	15.4	24.5	30.9
	100	15.0	23.9	30.1
30	1	15.3	24.2	30.5
	5	14.3	22.7	28.6
	10	13.9	22.1	27.8
	25	13.4	21.3	26.8
	50	13.0	20.7	26.1
	100	12.7	20.1	25.4
40	1	13.0	20.6	25.9
	5	12.1	19.2	24.2
	10	11.8	18.7	23.5
	25	11.3	18.0	22.6
	50	11.0	17.4	22.0
	100	10.7	16.9	21.4
50	1	11.0	17.4	21.9
	5	10.2	16.2	20.4
	10	9.9	15.7	19.8
	25	9.5	15.1	19.0
	50	9.2	14.7	18.5
	100	9.0	14.2	17.9

Temperature in C	Years of Service	SDR 11 / PN 10	SDR 7.4 / PN 16	SDR 6 / PN 20
60	1	9.2	14.7	18.5
	5	8.6	13.6	17.2
	10	8.3	13.2	16.6
	25	8.0	12.7	16.0
	50	7.7	12.3	15.5
70	1	7.8	12.3	15.5
	5	7.2	11.4	14.4
	10	7.0	11.1	13.9
	25	6.0	9.6	12.1
	50	5.1	8.1	10.2
80	1	6.5	10.3	13.0
	5	5.7	9.1	11.5
	10	4.8	7.7	9.7
	25	3.9	6.2	7.8
95	1	4.6	7.3	9.2
	5	3.1	4.9	6.2
	10	(2.6)	(4.1)	(5.2)

As per DIN 8077:1999-07 allowable working pressure for PPR pipes with SF = 1.25




THERMAL EXPANSION

A pipe line which is subjected to a variation of temperatures changes its length if it is free to do so. These changes in length are proportional to the unit linear coefficient of thermal expansion.

Pipe in Length (Mtr)	Temperature Difference (-T) 0C							
0.1	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20
0.2	0.30	0.60	0.90	1.20	1.50	1.80	2.10	2.40
0.3	0.45	0.90	1.35	4.80	2.25	2.70	3.15	3.60
0.4	0.60	1.20	1.80	2.25	3.00	3.60	4.20	4.80
0.5	0.75	1.50	2.25	3.00	3.75	4.50	5.25	6.00
0.6	0.90	1.80	2.70	3.60	4.50	5.40	6.30	7.20
0.7	1.05	2.10	3.15	4.20	5.25	6.30	7.35	8.40
0.8	1.20	2.40	3.60	4.80	6.00	7.20	8.40	9.60
0.9	1.35	2.70	4.05	5.40	6.75	8.10	9.45	10.80
1.0	1.50	3.00	4.50	6.00	7.50	9.00	10.50	12.00
2.0	3.00	6.00	9.00	12.00	15.00	18.00	21.00	24.00
3.0	4.50	9.00	13.50	18.00	22.50	27.00	31.50	36.00
4.0	6.00	12.00	18.00	24.00	30.00	36.00	42.00	48.00
5.0	7.50	15.00	22.50	30.00	37.50	45.00	52.50	60.00
6.0	9.00	18.00	27.00	36.00	45.00	54.00	63.00	72.00
7.0	10.50	21.00	31.50	42.00	52.50	63.00	73.50	84.00
8.0	12.00	24.00	36.00	48.00	60.00	72.00	84.00	96.00
9.0	13.50	27.00	40.50	54.00	67.50	81.00	94.50	108.00
10.0	15.00	30.00	45.00	60.00	75.00	90.00	105.00	120.00

TECHNICAL & COMMERCIAL COMPARISON

Properties	MS Pipes	CPVC Pipes	PPR Pipes
Service Life	3-5 years	15-20 years	50 years
Food Grade	Poor due to corrosion issues	The solution used for jointing the pipes might contaminate the water. Non-Hygienic in Nature	Hygienic, CFTRI approved- can supply clean water and liquid food
Leakage	High chance	High Chance due to Solution Based Jointing	Negligible chance due to Socket Fusion Jointing
Heat Loss	High	Negligible	Negligible
Thermal Conductivity	Very High (45 W/mK)	Low (0.3 W/mk)	Low (0.23 W/mk)
Insulation Requirement in Chilled Water Supply	More Insulation thickness required due to high thermal conductivity	Pipes not recommended for Chilled Water Supply	1/2 or 1/3rd insulation thickness than MS as thermal conductivity is quite low
Maintenance Cost	High after 3-4 years	High after 5-6 years	Negligible upto 15-20 years
Corrosion Resistance	Nil	Excellent	Excellent
Friction	Very High	Low, approx 4 ft/100 ft	Negligible due to smooth layer, approx 1.5 ft/100 ft
Weight	Very heavy	Very light due to which transportation cost decreases by 3 times	Very light due to which transportation cost decreases by 3 times
Painting Cost	Additionally high for the painting the pipes accoridng to standards	None	None
Young's Modulus	NA	Approx 3275 Mpa which makes the pipe rigid and brittle	Aprrox 850 Mpa which make the Pipes tough and ductile
Temperature Resistance	Applicable for Higher Temperatures as well	10 Degree Celcius to 80 Degree Celcius (Adhesives used for Joints can be used only upto 60 Degree Celsius)	(-8) to 95 Degree Celsius
CAPEX Costing	30-35% Higher than PPR-C	45-50% Higher Than PPR-C	Very Low CAPEX Costing
OPEX Costing	55-60% Higher than PPR-C because of High Maintenance	20-25% Higher than PPR-C	Very Low OPEX Costing because of Negligible Maintenance
Installation Time	Very High because of Welding Joints and more Man-Power Required	Negligible as Solution based joints	Low because of Socket Fusion Jointing

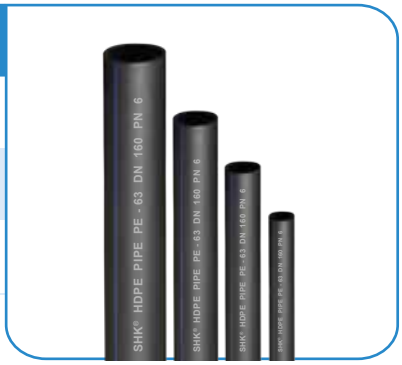
PRODUCT SPECIFICATION

SHK PPR-C Triple Layer Pipes & Fittings

Type	Size
PN 06 Pipes	200 mm to 400 mm
PN 10 Pipes	32 mm to 315 mm
PN 16 Pipes	20 mm to 315 mm
PN 20 Pipes	20 mm to 315 mm

SHK HDPE Pipes & Fittings (PE100, PE80 & PE63)

Type	Size
PN 2.5 to PN 06 Pipes	40 mm to 450 mm
PN 08 to PN 16 Pipes	20 mm to 315 mm



SHK Pneumato PPR-C Pipes & Fittings

Type	Size
PN 06 Pipes	200 mm to 400 mm
PN 10 Pipes	50 mm to 315 mm
PN 16 Pipes	20 mm to 315 mm
PN 20 Pipes	20 mm to 315 mm

SHK EF Electrofusion HDPE Fittings

Size	63 mm to 315 mm

PPR-C GREEN FITTINGS

(Size : 20 mm to 400 mm)

Socket

Elbow 90 degree

Elbow 45 degree

Tee

End Cap

Flange Core/Stubend

Reducer

Reducer Tee

PPR-Flange

M/S Powder Coated Flange

Reducing Elbow

Union

Long Bend

F T Saddle

Saddle

Wall Clamp

PPR-C GREEN FITTINGS

(Size : 20 mm to 400 mm)

F T Socket

M T Socket

F T Union

M T Union

F T Elbow

M T Elbow

F T Tee

M T Tee

Gate Valve

Plastic Body Ball Valve

Tank Connector

Long Plug

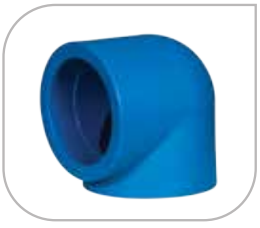
Cross Tee

PPR-C BLUE FITTINGS

(Size : 20 mm to 400 mm)

Socket

Elbow 90 degree



Elbow 45 degree

Tee

End Cap

Flange Core/Stubend

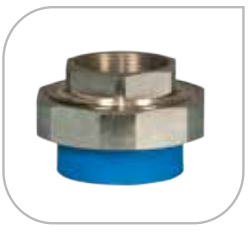
Reducer

Reducer Tee

Flange

M T Socket

F T Union



M T Union

F T Socket

F T Elbow

M T Elbow

F T Tee

M T Tee

Long Bend

WELDING PROCESS

Cutting

- Cut the pipe at right angle to its axis using burr-free cutter
- Ensure that pipe is free from burrs or cutting chips
- Clean the pipe & fitting perfectly before welding.
- Mark welding depth at the end of pipe

Heating

- Mount the suitable Dies (Socket and Pucnh) on heating element of welding machine according to the diameter of pipe and fitting to be welded
- Connect the welding machine to 220 Volts A.C. power supply
- Select 260 C temperature on the welding machine hermostat
- Wait for reaching the required working temperature
- Insert the pipe and the fitting in the Dies (i.e. Socket and Punch respectively) by exerting light pressure
- Heat both pipe & fitting as per the size and time given in the following table

Welding

- After heating, quickly insert pipe into the fitting by exerting light pressure
- Any misalignment should be corrected immediately after insertion to avoid any stress in the weld. This type of connection ensures perfect sealing even under the hard working conditions.

Note :

1. Avoid air draughts during welding to avoid stress in the welds.
2. During site welding, keep the welding set at a right angle to the pipe and fitting in order to avoid partial welding.

Pipe Dia. (mm)	Welding Depth (mm)	Heating Time (Sec)	Welding Time (Sec)	Cooling Time (Min)
20	14.50	6	4	2
25	16.00	7	4	2
32	18.00	8	6	4
40	20.50	12	6	4
50	23.50	18	6	4
63	27.50	24	8	6
75	30.00	30	8	6
90	33.00	40	8	6
110	37.00	52	10	8

QUALITY CERTIFICATES


BUREAU OF INDIAN STANDARDS


QRO
QUALITY RESEARCH ORGANISATION

Certificate of Registration

This is to certify that

SHK Polymers Industries

Registered Address: PLOT NO. 139/1, PHASE-I, OPP- PATEL ALLOYS STEEL LTD., G.I.D.C. ESTATE, VATVA, AHMEDABAD-382445, GUJARAT, INDIA.
Factory Address: SURVEY NO. 203, KUHA-PASUNJ ROAD, BILIPUR PATIYA, VILLAGE PASUNJ, TA: DASKROI, DIST: AHMEDABAD-382430, GUJARAT, INDIA.

has been independently assessed by QRO

and is compliant with the requirement of:

ISO 9001:2015

Quality Management System

For the following scope of activities:

Manufacture and Supply of HDPE Pipes, PLB Duct, PPR Pipes, Industrial PP Valves, HDPE Fittings, PPR Fittings and Thermal Composite Pipes.

Date of Certification: 28th December 2020 — 2nd Surveillance Audit Due: 27th December 2022
1st Surveillance Audit Due: 27th December 2021 — Certificate Expiry: 27th December 2023

Certificate Number: 2020122801


Report No. PPCD/SSP/378

Report

On

Evaluation of "SHK" brand PPR pipes & fittings for hot and cod water supply in buildings

Sponsored by

M/s SHK Polymer Industries
Plot No 111/A, GIDC Estate, Vatva
Ahmedabad -382445 (Gujarat)

CSIR- Central Building Research Institute
Roorkee 247667 (Uttarakhand)
2019


cftri

TEST REPORT


WRAS

Approval Number 2012569
Test Report: J-00367579 & J-00367574

Water Regulations Approval Scheme Ltd,
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP11 4EG

20th December 2021

SHK Polymers Industries
Harikrishna House, Plot No. - 139/1, Phase - I,
Opp. Patel Alloy Steel Ltd.
GIDC,
Vatva,
Ahmedabad - 382 445,
Gujarat,
India

WATER REGULATIONS APPROVAL SCHEME LTD. (WRAS)
MATERIAL APPROVAL

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920+1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYPROPYLENE- COMPONENTS. **5260**

'SHK Aqua Fitting', Green coloured, injection moulded PP-R fitting, For use with water up to 85°C.

APPROVAL NUMBER: 2012569
APPROVAL HOLDER: SHK POLYMERS INDUSTRIES

The Scheme reserves the right to review approval.
Approval 2012569 is valid between December 2020 and December 2025

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, 'Materials which have passed full tests of effect on water quality'.

The Directory may be found at: www.wrasapprovals.co.uk/approvals-directory/

Yours Faithfully

Ian Hughes
WRAS Approvals Manager


WRAS

Approval Number 2012572
Test Report: J-00367574 & J-00390898

Water Regulations Approval Scheme Ltd,
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP11 4EG

11th February 2022

SHK Polymers Industries
Harikrishna House, Plot No. - 139/1, Phase - I,
Opp. Patel Alloy Steel Ltd.
GIDC,
Vatva,
Ahmedabad - 382 445,
Gujarat,
India

WATER REGULATIONS APPROVAL SCHEME LTD. (WRAS)
MATERIAL APPROVAL

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920+1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYPROPYLENE- COMPONENTS. **5260**

'SHK Aqua PP-R pipe',

Extruded, multi-layered PP-R pipe comprising of a white coloured inner, black coloured middle layer and green coloured outer layer.

For use with water up to 85°C.

APPROVAL NUMBER: 2012572
APPROVAL HOLDER: SHK POLYMERS INDUSTRIES

The Scheme reserves the right to review approval.
Approval 2012572 is valid between December 2020 and December 2025

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, 'Materials which have passed full tests of effect on water quality'.

The Directory may be found at: www.wrasapprovals.co.uk/approvals-directory/

Yours Faithfully

Ian Hughes
WRAS Approvals Manager

ISO 9001 - 2015 certified company

IS : 15801

CM/L-7200068512

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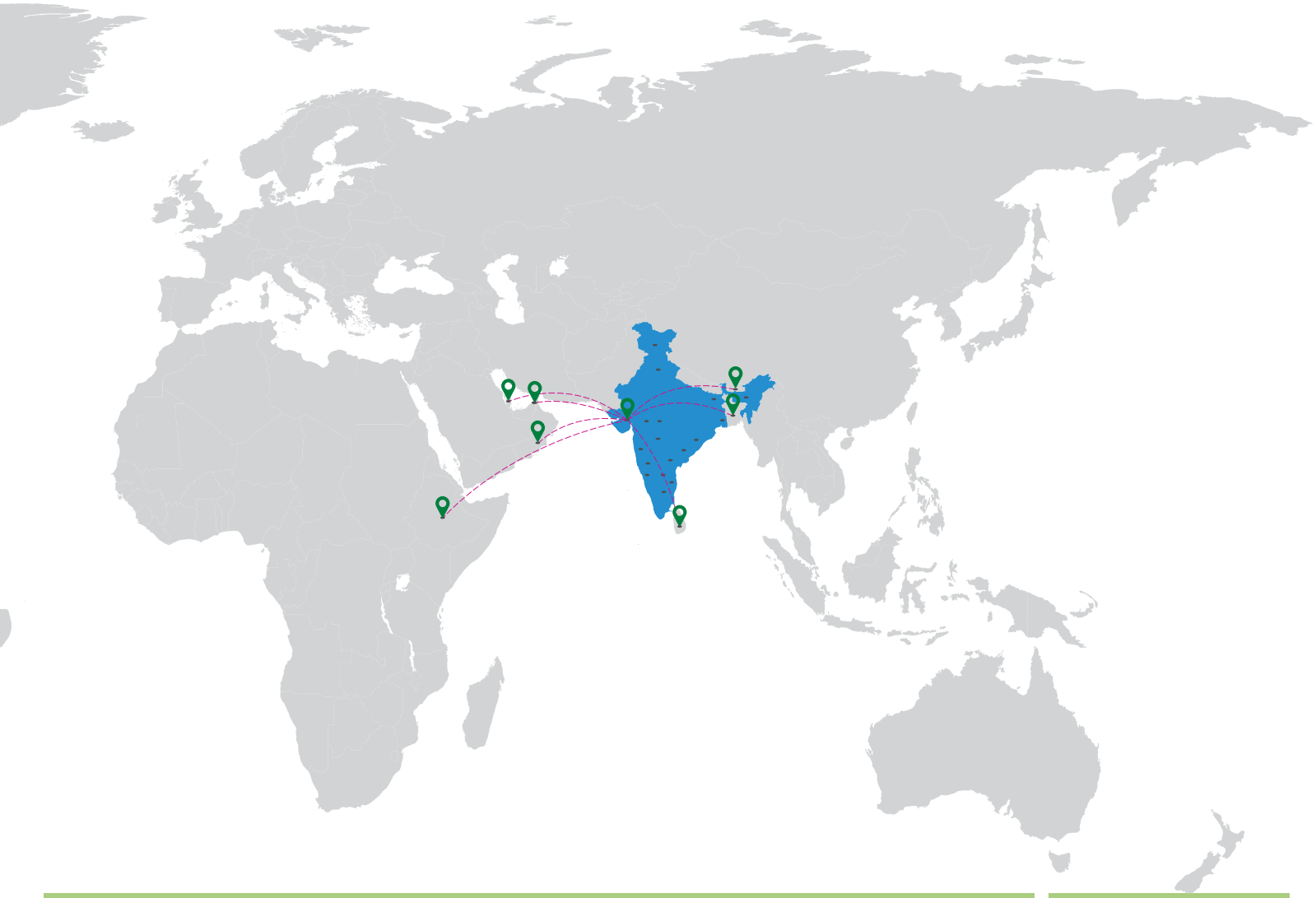

Domestic

1) Ahmedabad
2) Baroda
3) Ankleshwar
4) Dahej
5) Panoli
6) Surat
7) Vapi
8) Diu and Daman
9) Morbi
10) Rajkot
11) Gandhidham
12) Aurangabad
13) Kolhapur
14) Pune
15) Mumbai
16) Boisar
17) Vasai
18) Solapur
19) Ahmednagar
20) Bhuj
21) Selvasa
22) Icchhalkaranji
23) Dhule
24) Nagpur
25) Nashik
26) Indore
27) Bhopal
28) Belgaum
29) Bangalore
30) Mangalore
31) Mysore
32) Chennai
33) Coimbatore
34) Dindigul
35) Madurai
36) Cochi
37) Goa
38) Hyderabad
39) Secunderabad
40) Kolkata
41) Siliguri
42) Guwahati
43) Jammu
44) Kashmir
45) Leh
46) Delhi
47) Patna
48) Vizag
49) Chandigarh

International

1) Sri Lanka
2) Bangladesh
3) Bhutan
4) Dubai
5) Qatar
6) Oman
7) Ethiopia

OUR CLIENTS

Sector : Ceramic Industries

Application
Multiple

Application
Multiple

Application
Multiple

Application
Multiple

Application
Multiple

Sector : Plastic Industries

Application
Multiple

Application
Cooling Tower

Application
Chilled Water Supply

Application
Chilled Water Supply

Sector : Government

Application
Multiple Applications

Application
Multiple

Sector : Food & Beverages

Application
Cooling Tower & ETP

Application
ETP & Cooling Tower

Application
Multiple Applications

Sector : Institutes

Application
Water Supply

Application
Chilled Water Supply

Application
Chilled Water Supply

Sector : Chemical Industries

Application
Multiple

Application
Multiple

Application
Multiple

Application
Raw Water and Process Water

Application
Chemical Supply and Raw Water

Sector : Foundry

Application
Compressed Air Supply

Application
Compressed Air Supply

Application
Cooling Tower &
Compressed Air

OUR CLIENTS

Sector : Pharmaceutical

Application Mulitple	**Application** Mulitple	**Application** Cooling Tower	**Application** Mulitple	**Application** Cooling Tower	**Application** Multiple
Application Mulitple	**Application** Chilled Water Supply	**Application** Chilled Water Supply	**Application** Chilled Water Supply	**Application** Multiple	

Sector : Textile

Application Multiple	**Application** Compressed Air Supply	**Application** Compressed Air Supply	**Application** Mulitple

Sector : Other Clients

Application Compressed Air Supply	**Application** Compressed Air Supply	**Application** Chilled Water Supply	**Application** Multiple	**Application** Compressed Air Supply	**Application** Chilled Water Supply
Application Chilled Water SupplyV	**Application** Multiple	**Application** Multiple	**Application** Chilled Water Supply	**Application** Chilled Water Supply	**Application** Multiple
Application Chilled Water Supply					

Shreeharikrishna Group

SHK POLYMERS INDUSTRIES

Reg. Office

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