

# novatherm<sup>®</sup>

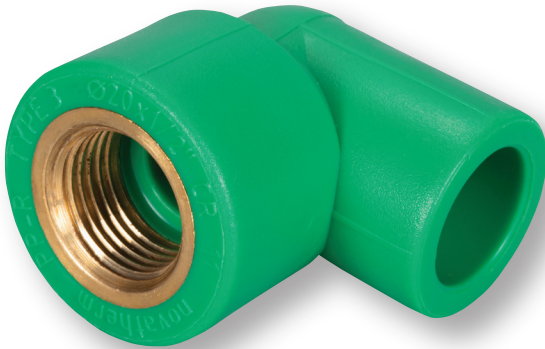
## PP-R PIPES & FITTINGS

Expert in Water Supply Systems

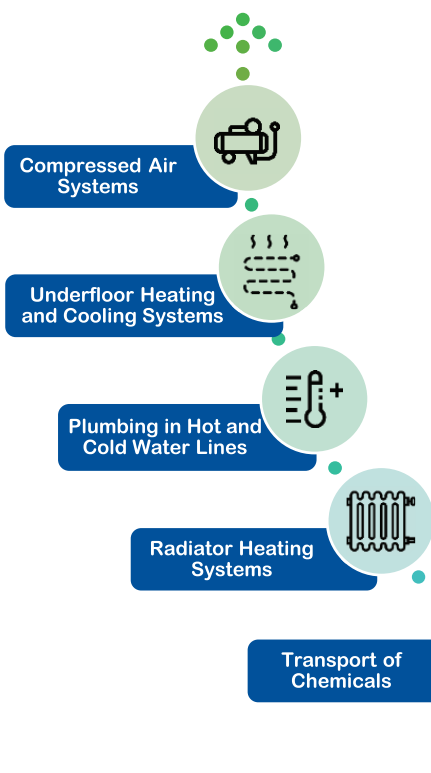


# A Leading Brand in Thermoplastic Piping

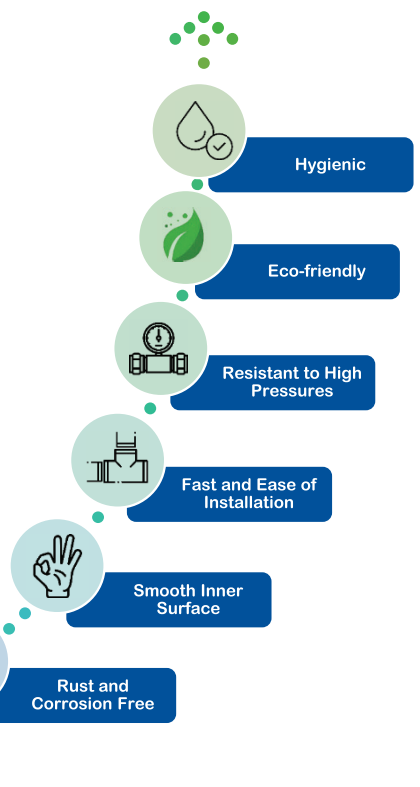
PP R pipes and fittings are manufactured from high quality, Polypropylene Random Co polymer (PP R Type 3) resins. Its physical and chemical properties make **Novatherm** a versatile piping system in a wide range of applications in different industries.



## Application Areas



## Advantages



## Permissible Operating Pressures

Temperature, °C	Service Life, Years	For water installations According to DIN 8077 Safety - Factor of 1.5			
		NOVATHERM PPR Pipe SDR 11	NOVATHERM PPR Pipe SDR 7.4	NOVATHERM PPR Pipe SDR 6	NOVATHERM PPR Pipe SDR 5
10	1	17.5	27.8	35.1	44.1
	5	16.5	26.2	33	41.6
	10	16.1	25.6	32.2	40.5
	25	15.6	24.7	31.1	39.2
	50	15.2	24.1	30.3	38.2
20	100	14.9	23.5	29.6	37.2
	1	15	23.7	29.9	37.7
	5	14.1	22.3	28.1	35.4
	10	13.7	21.7	27.4	34.5
	25	13.2	21	26.4	33.3
30	50	12.9	20.4	25.7	32.4
	100	12.5	19.9	25	31.5
	1	12.7	20.2	25.4	32
	5	11.9	18.9	23.8	30
	10	11.6	18.4	23.2	29.2
40	25	11.2	17.7	22.3	28.1
	50	10.9	17.2	21.7	27.4
	100	10.6	16.8	21.1	26.6
	1	10.8	17.1	21.6	27.2
	5	10.1	16	20.2	25.4
50	10	9.8	15.5	19.6	24.7
	25	9.4	15	18.8	23.7
	50	9.2	14.5	18.3	23.1
	100	8.9	14.1	17.8	22.4
	1	9.1	14.5	18.2	23
60	5	8.5	13.5	17	21.4
	10	8.2	13.1	16.5	20.8
	25	7.9	12.6	15.9	20
	50	7.7	12.2	15.4	19.4
	100	7.5	11.8	14.9	18.8
70	1	7.7	12.2	15.4	19.4
	5	7.1	11.3	14.3	18
	10	6.9	11	13.9	17.5
	25	6.6	10.5	13.3	16.7
	50	6.4	10.2	12.9	16.2
80	1	6.5	10.3	12.9	16.3
	5	6	9.5	12	15.1
	10	5.8	9.2	11.6	14.6
	25	5	8	10	12.7
	50	4.2	6.7	8.5	10.7
95	1	5.4	8.6	10.8	13.7
	5	4.8	7.6	9.6	12.1
	10	4	6.4	8.1	10.2
95	25	3.2	5.1	6.5	8.1
	1	3.8	6.1	7.6	9.6
5	2.6	4.1	5.2	6.5	

## Projected Service Life

The table on the left provides more detailed information on permissible pressures of various pipe pressure ratings at various temperatures.

### Examples

**Novatherm PP-R SDR 11** cold water pipe, transporting water at a temperature of **20°C** is projected to last more than **100 years** under normal operating conditions with an operating pressure of **12.5 bar**.

**Novatherm PP-R SDR 6** hot water pipe, transporting water at a temperature of **70°C** is projected to last more than **50 years** under normal operating conditions with an operating pressure of **8.5 bar**.

SDR is the short form of Standard Dimension Ratio

SDR = Diameter / Wall Thickness

SDR = d / s = Pipes series index from ISO 4065

## Quality Assurance & Health Certifications



KREIS RECKLINGHAUSEN  
DER VESTISCHE KREIS



## PP-R Monolayer Pipes

Novatherm is an expert to supply plastic pipe systems, heating and ventilation systems. The company is committed to supply especially innovative products for residential non-residential and civil engineering projects.

Novatherm Plastic Pipes and Fittings are produced in pioneer facilities located in Turkey and have been offering solutions mainly to the water transport needs of the construction sector in residential buildings and in infrastructure Engineers, consultants, architects, plumbers and contractors from all around the world prefer the quality of Novatherm products in areas such as hot and cold water supply, under floor heating systems.

### Class Information

- Class 1/10 bar
- Class 2/8 bar
- Class 4/10 bar
- Class 5/6 bar

At Novatherm, we know what plumbers want and need!

SDR 6 Hot & Cold Water PN20		SDR 7.4 Hot & Cold Water PN16		SDR 11 Cold Water PN10	
Dimension, OD (mm)	Thickness (mm)	Dimension, OD (mm)	Thickness (mm)	Dimension, OD (mm)	Thickness (mm)
20	3.4	20	2.8	20	2.0
25	4.2	25	3.5	25	2.3
32	5.4	32	4.4	32	2.9
40	6.7	40	5.5	40	3.7
50	8.3	50	6.9	50	4.6
63	10.5	63	8.6	63	5.8
75	12.5	75	10.3	75	6.8
90	15.0	90	12.3	90	8.2
110	18.3	110	15.1	110	10.0
125	20.8	125	17.1	125	11.4
160	26.6	160	21.9	160	14.6
200	33.2	200	27.4	200	18.2
-	-	250	34.2	250	22.7

### Properties of PP-R Piping Systems

Raw Material	PP-R
Density at 23°C	0.9 g/cm <sup>3</sup>
Pipe Length	4 m - 6 m
Connection	Fusion Welding
<b>Coefficient of Linear Thermal Expansion:</b>	
- PPR Monolayer Pipes	0.150 mm/mK
- PPR Faser Pipes	0.040 mm/mK
- PPR Stabi Super Pipes	0.025 mm/mK
<b>Thermal Conductivity at 20°C:</b>	
- PPR Monolayer Pipes	0.240 W/mK
- PPR Faser Pipes	0.183 W/mK

*Under normal working pressures and conditions, the service life of Novatherm pipes is guaranteed to be more than 50 years.*



Yasmeen City, Lusail Qatar

## Faser Pipes

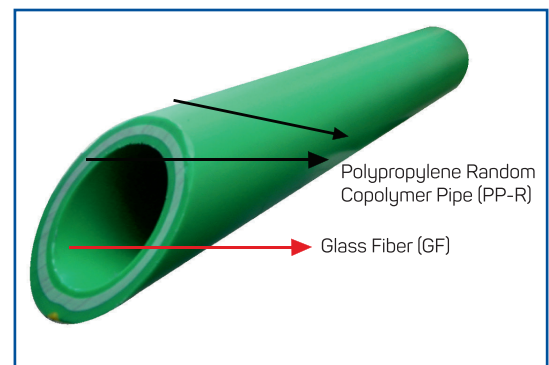
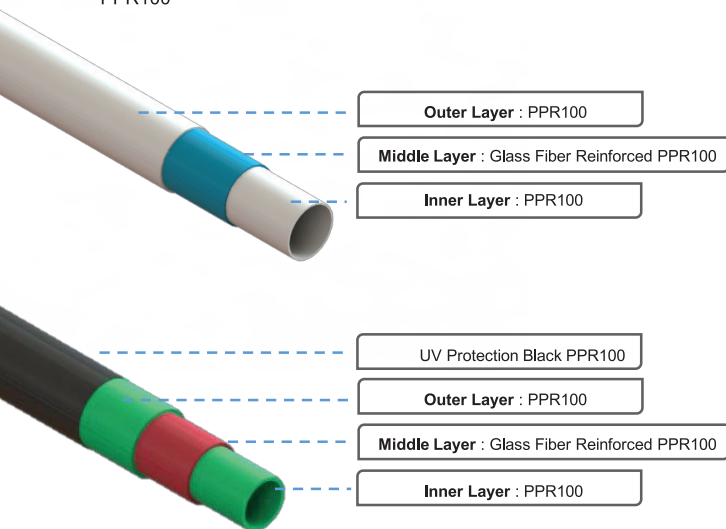
- Novatherm Faser Pipes consist of three layers including %20 Fiber Glass and %80 PPR100 raw materials.

SDR 6 Hot & Cold Water PN25*		SDR 7.4 Hot & Cold Water PN20*		SDR 11 Cold Water PN16*	
Dimension, OD (mm)	Thickness (mm)	Dimension, OD (mm)	Thickness (mm)	Dimension, OD (mm)	Thickness (mm)
20	3.4	20	2.8	-	-
25	4.2	25	3.5	-	-
32	5.4	32	4.4	32	2.9
40	6.7	40	5.5	40	3.7
50	8.3	50	6.9	50	4.6
63	10.5	63	8.6	63	5.8
75	12.5	75	10.3	75	6.8
90	15.0	90	12.3	90	8.2
110	18.3	110	15.1	110	10.0
125	20.8	125	17.1	125	11.4
160	26.6	160	21.9	160	14.6
200	33.2	200	27.4	200	18.2
-	-	250	34.2	250	22.7

### Class Information

- Class 1/10 bar
- Class 2/8 bar
- Class 4/10 bar
- Class 5/6 bar

\* PPR100



Linear Expansion (mm/m)

Linear Expansion of PP-R Pipes

