



PIPES AND FITTINGS FOR USE IN HOT & COLD TAP WATER AND HEATING SYSTEMS

PRODUCT
CATALOGUE

Aquaterra

Polypropylene Pipes and Fittings

Your Guarantee for High Quality Construction Materials and Engineering Solutions.





Introductions

AQUAGAS Plastic Industries is a leading manufacturing of high quality construction materials and advanced engineering solutions founded in year 2010. AQUAGAS Plastic Industries manufacture pipes and fittings with an extensive range of market segments and applications covering Soil and waste drainage, Cold/hot water piping system, Cooling/heating systems, Cooling and chilled water piping for all residential, commercial and industrial developments.

With over years of experience, state of the art manufacturing facilities and large production capacity in the Middle East, AQUAGAS Plastic Industries manufacture products to international quality standards and caters to customers' demands by ensuring timely delivery and providing exceptional services.



Polypropylene Pipes and Fittings

AQUATerra polypropylene pipes and fittings are produced using the highest quality of 100% virgin type 3 polypropylene with 50 years estimated and guaranteed service life complying with the following standards:

- DIN8077, Germany.
- DIN8078, Germany.
- DIN16962, Germany.
- EN ISO 15874 Europe.

AQUATERRA PPR Pipes are manufactured with an acceptable tolerances in the ID and wall thickness as per the DIN standards 8077 & 8078 and EN ISO 15874

Pipes types and options vary as per the application type.

AREAS OF APPLICATION:

- POTABLE WATER PIPELINE NETWORKS
- For cold, warm and hot water installations including boiler connections, riser lines, gravity lines, and floor level distribution and concealed lines.
- Underground heating system.
- Radiators connections.
- Compressed air and Industrial pipelines including aggressive media under consideration of chemical resistance.
- agricultural pipelines

Installer can choose one of the different types of pipes to suit the operating conditions:

PIPES TYPES:

- PN16 Plain PPR Pipes.
- PN20 Plain PPR Pipes.
- PN20 PPR Fiber Composite Pipes.
- PN25 PPR Fiber Composite Pipes.
- SDR 9 PP-RCT Fiber Composite Pipes.
- SDR 7.4 PP-RCT Fiber Composite Pipes.
- SDR 6 PP-RCT Fiber Composite Pipes.
- SDR 6 UV protected Fiber Composite pipes.
- SDR 7.4 UV protected Fiber Composite pipes.

AQUATERRA FITTINGS:

As fittings are the most critical part of the system, AQUATerra fittings are produced in a PN-25 pressure class making the fittings the strongest part in the system.

All metal inserts fittings are BSPT type and made of brass nickel plated, DZR/Brass joined with the PP-R confirming no direct contact between the water and the brass parts to avoid any zincification or oxidation of the metals which can affect the quality of the potable water.

The threaded joints of adaptors comply with the requirements of the DIN 2999 resp Iso7; i.e. cylindrical female threads, and conical male threads.

Male threads for connecting backnut comply with the requirements of DIN ISO 228, part 1.

JOINTING METHOD:

- Fusion type in accordance to the DVS (German welding ins.) specifications: 2207, part 11, Section 3.2 DIN 16962.

TOOLS AND DEVICES:

- For socket welding by heating elements according to DVS leaflet 2208, Part 1, Section 5, Schedule 2, Type A.

RAW MATERIAL:

RA140, R200P

Polypropylene Random Copolymer (PPR Type 3) for Pressure Pipes Systems.

RA 7050-GN

Polypropylene random copolymer crystalline temperature (PPR-CT Type 4) for Pressure Pipes Systems.

DESCRIPTION

RA140, R200P is a high molecular weight, low melt flow rate polypropylene random copolymer (PP-R).

RA7050-GN is a PP-RCT, a Polypropylene-Random-Copolymer with an enhanced crystalline structure brought about by a special β -nucleation and with an improved Temperature resistance.

Proof of the excellent performance characteristics of Beta-PPR™ RA7050-GN is, for example, a categorised required strength (CRS) of 5 MPa at 70°C and 50 years (according to ISO 12162) in comparison to a value of 3.21 MPa for standard PP-R.

The colour of Beta-PPR™ RA7050-GN is green similar to RAL 6024.

APPLICATIONS

RA140, R200P together with the appropriate additive package is recommended for the production of PP-R Pipes and fittings used in: Heating, Plumbing, Domestic water, Relining, and Industrial applications.

The product is suitable for plain, and Faser Composite Multilayer PP-R pipes.

SPECIFICATIONS

RA140, R200P is intended to fulfill the following standards and regulations, providing the appropriate industrial manufacturing standard procedures are used and a continuous quality system is implemented: DIN 8077, DIN 8078 and EN ISO 15874.

SPECIAL FEATURES

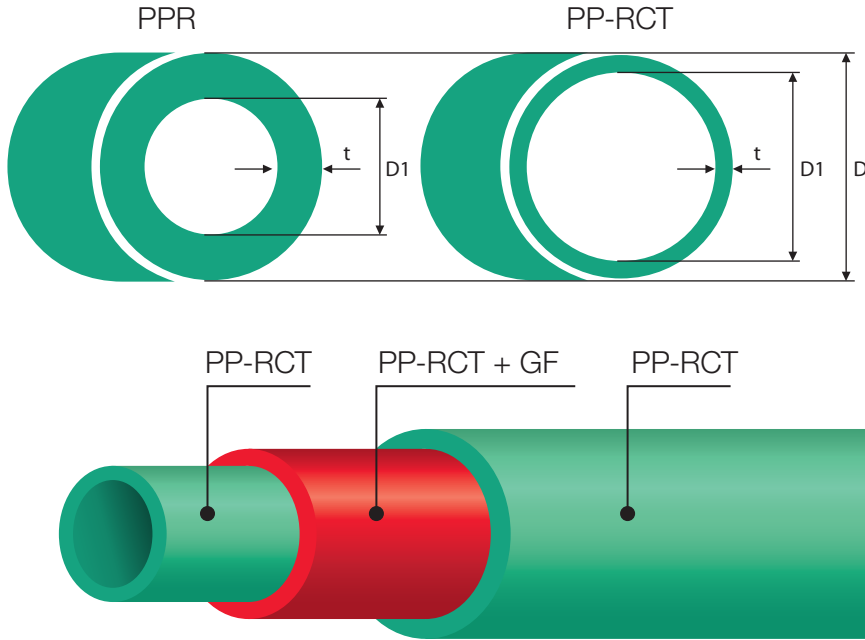
RA140, R200P is a natural grade used for production of pipes and fittings. The material is in pallet form and includes selected additive package which ensure:

- Enhanced process ability
- High temperature resistance
- Economical pipe production
- Low incidence on taste and odour
- Excellent product consistency
- Good impact strength

The pipe systems will show high durability, no corrosion, good weld ability, homogeneous joints, low tendency to incrustations and fast and easy installation.

PPR-CT

Polypropylene random copolymer crystalline temperature (PPR-CT Type 4) is an enhanced crystalline structure is created through special nucleation process that makes ppr operate at higher pressures at elevated temperatures offering at least 50% improved strength.



Permissible working. Pressure and temperature for PP-RCT

Temperature	Operating Time [years]	SDR 11 PP-RCT	SDR 9 PP-RCT	SDR 7.4 PP-RCT	SDR 6 PP-RCT
20°C	10	15.8	19.9	25.1	31.6
	25	15.5	19.6	24.6	31
	50	15.3	19.3	24.3	30.6
30°C	10	13.6	17.2	21.7	27.3
	25	13.4	16.9	21.2	26.8
	50	13.2	16.6	20.9	26.4
40°C	10	11.7	14.7	18.6	23.4
	25	11.5	14.4	18.2	22.9
	50	11.3	14.2	17.9	22.6
60°C	10	8.4	10.6	13.4	16.8
	25	8.2	10.4	13.1	16.5
	50	8.1	10.2	12.8	16.2
70°C	10	7	8.9	11.2	14.1
	25	6.9	8.7	10.9	13.8
	50	6.8	8.5	10.7	13.5
80°C	10	5.9	7.4	9.3	11.7
	25	5.7	7.2	9.1	11.4
95°C	5	4.4	5.6	7.1	8.9

Permissible operating pressures in bar (including a safety factor of 1.5)

Permissible working. Pressure and temperature for PP-RCT

Temperature	Operating Time [years]	SDR 11 PP-RCT	SDR 9 PP-RCT	SDR 7.4 PP-RCT	SDR 6 PP-RCT
20°C	10	19	23.9	30.1	37.9
	25	18.6	23.5	29.6	37.2
	50	18.4	23.1	29.2	36.7
30°C	10	16.4	20.6	26	32.7
	25	16.1	20.2	25.5	32.1
	50	15.8	19.9	25.1	31.6
40°C	10	14.1	17.7	22.3	28.1
	25	13.8	17.3	21.8	27.5
	50	13.6	17.1	21.5	27.1
60°C	10	10.1	12.7	16	20.2
	25	9.9	12.4	15.7	19.8
	50	9.7	12.2	15.4	19.4
70°C	10	8.5	10.7	13.5	16.9
	25	8.3	10.4	13.1	16.5
	50	8.1	10.2	12.9	16.2
80°C	10	7	8.9	11.2	14.1
	25	6.9	8.6	10.9	13.7
95°C	5	5.3	6.7	8.5	10.7

Permissible operating pressures in bar (including allowable a safety factor of 1.25)

OPERATING CONDITIONS

Temperature [°C]	Years of service	Pipe grade (according DIN 8077/8078)				
		Nominal pressure				
		PN 10	PN 16	PN 20	PN 25	
		Permissible working pressure [bar] *				
10	1	17,6	28,2	35,2	44,2	
	5	16,5	26,5	33,1	41,8	
	10	16,1	25,8	32,3	40,4	
	25	15,6	25,0	31,2	39,1	
	50	15,2	24,3	30,4	38,1	
	100	14,8	23,7	29,6	37,1	
20	1	14,9	23,9	29,9	37,8	
	5	14,1	22,6	28,3	35,4	
	10	13,7	22,0	27,5	34,4	
	25	13,3	21,3	26,7	33,4	
	50	12,9	20,7	25,9	32,4	
	100	12,5	19,5	25,1	31,4	
30	1	12,8	20,5	25,6	32,1	
	5	12,0	19,2	24,0	30,1	
	10	11,6	18,6	23,2	29,1	
	25	11,2	17,9	22,4	28,1	
	50	10,9	17,5	21,9	27,4	
	40	1	10,8	17,3	21,6	27,1
5		10,1	16,2	20,3	25,4	
10		9,9	15,8	19,7	24,7	
25		9,5	15,2	18,9	23,7	
50		9,2	14,7	18,4	23,1	
50		1	9,1	14,6	18,3	23,1
	5	8,5	13,7	17,1	21,4	
	10	8,3	13,2	16,5	20,7	
	25	8,0	12,8	16,0	20,0	
	50	7,7	12,4	15,5	19,4	
	60	1	7,7	12,4	15,5	19,4
5		7,2	11,5	14,4	18	
10		6,9	11,1	13,9	17,4	
25		6,7	10,7	13,3	16,7	
50		6,5	10,4	12,9	16	
70		1	6,5	10,5	13,1	16,4
	5	6,0	9,6	12,0	15,0	
	10	5,8	9,3	11,6	14,7	
	25	4,9	7,9	9,9	12,7	
	50	4,3	6,8	8,5	10,7	
	80	1	5,5	8,8	10,9	13,7
5		4,8	7,7	9,6	12,0	
10		4,0	6,4	8,0	10,0	
25		3,2	5,1	6,4	8,0	
95		1	3,9	6,2	7,7	9,7
		5	2,6	4,1	5,2	6,3
	(10)	2,2	3,5	4,3	5,3	

Explanations:

* Permissible working pressure as given at safety factor 1,5

 – recommended application cold water installation

 – recommended application hot water installation

 – recommended application central heating installation

UV Protection

PPR & PP-RCT pipes and fittings are designed for indoor use. They are not stabilized for direct Ultraviolet (UV) exposure. Over Time, UV exposure causes degradation, resulting in decreases in the pipe's physical and chemical properties and long-term performance. If the pipes are to be used outdoors, they should be buried or encased in a protective wrap coating or treated described below.

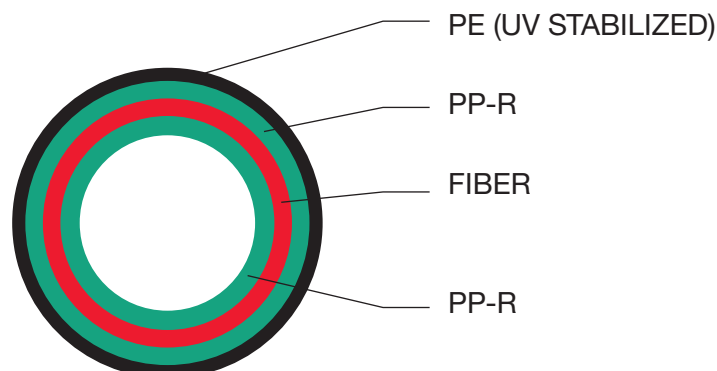
Ultraviolet radiation is an electromagnetic radiation presents in sunlight. So, when PPR pipes are exposed to sunlight for a long period it would affect the pipes by changing its color and chalk its surface.

A UV stabilizer added into the resin as a shield to UV radiation to protect the product from a long term UV radiation exposure; these 4 multilayer pipes are developed with an external Polyethylene UV-stabilized layer to protect the pipes from damage.

This method is applicable for full range of pipes sizes and nominal pressures so it can be used for outdoor application.

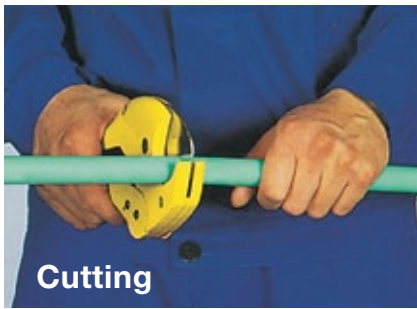
The resistance of the Aquaterra UV system against UV-radiation was tested by an accredited test laboratory. In planned intervals during the complete process, samples were taken in order to check possible mechanical changes based on a tensile test and it is approved for the contact with potable water and is the best choice for boiler connection on the top to the tapping points – outdoor and indoor.

It can be used as an ideal distribution system for Hot & Cold Water in residential and commercial buildings as well as for irrigation systems.

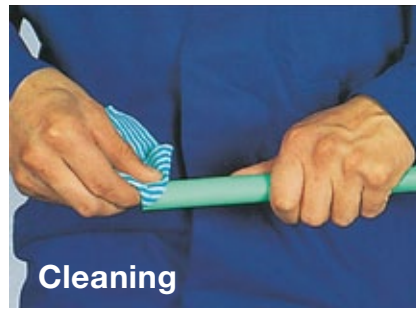


ASSEMBLY

Installation guide



1. Pipes should be cut down to required length, at 90° to the axis, using appropriate tools (pipe shears or cutters).



2. Before welding, pipes and fittings must be cleaned (to remove dust, grease, etc.) and dried.



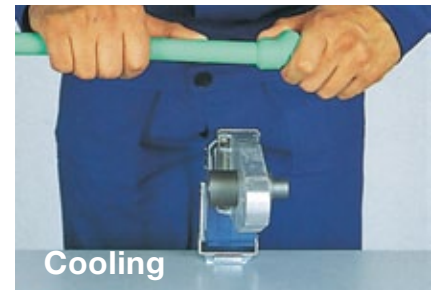
3. Mark the required depth of pipe insertion into the fitting (for a given outer pipe diameter - see the table).



4. Simultaneously insert the pipe end and slide the fitting over corresponding heating tips of the welder (heated up to 260 - 280° C earlier) Keep the required heating time - see heating time values for different system dimensions.



5. After heating, remove both elements from heating tips and push the pipe into the fitting flange up to the depth marked earlier. The welding time depends on the outer diameter of the pipe. Good welds should have a double, uniform fin of material pushed out to the surface, along the circumference connected elements.



6. It is recommended to keep the connection fixed for the next 10 - 20 seconds, allowing the weld to cool down partially and achieve the initial strength. It is now possible to make other connections of the system. Full load of the weld is allowed only when the connection has cooled down completely.

WELDING PROCESS PARAMETERS

Pipe diameter [mm]	Welding depth [mm]	Heating time* [s]	Welding time [s]	Cooling time [mm]
20	14	5	4	2
25	15	7	4	2
32	16	8	6	4
40	18	12	6	4
50	20	18	6	4
63	24	24	8	6
75	26	30	10	8
90	29	40	10	8
110	32.5	50	10	8
125	35	60	12	9
160	40	70	14	10

Note:

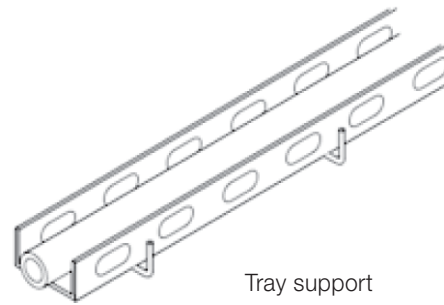
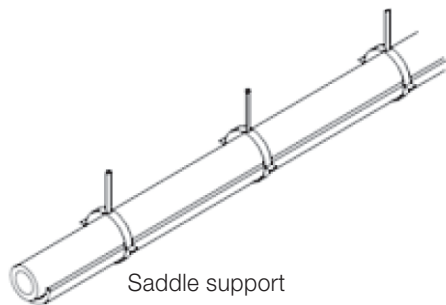
Values presented in the table refer to PN 16, PN 20 pipes and fiber composite PN20, PN25 & PN32 pipes.

DISTANCE BETWEEN SUPPORTS

Pipes can be installed on trays or saddles that provide support. Thus, when there are long sections on view, the expansion will enable the movement of the pipe on the tray but prevent the unsightly effect that expansion can cause.

The recommended distances are:

Diameter	Single Layer PPR				Three-layer FASER			
	Distance for tray support		Distance pipe-tray support		Distance for tray support		Distance pipe-tray support	
	Water < 30 °C	Water > 30 °C	Water < 30 °C	Water > 30 °C	Water < 30 °C	Water > 30 °C	Water < 30 °C	Water > 30 °C
20	1500	1000	500	200	1950	1300	650	260
25	1500	1200	500	300	1950	1560	650	390
32	1500	1200	750	400	1950	1560	975	520
40	1500	1200	750	600	1950	1560	975	780
50 / 63 / 75	1500	1500	750	750	1950	1950	975	975
90 / 110 / 125	2000	2000	1000	1000	2600	2600	1300	1300
160	2500	2500	1250	1250	3250	3250	1625	1625



When there is a riser with shunts, it is very important that this can absorb the expansion without loading tension on the shunts. According to ENV 12108, there commended distance between two guide clamps or between a guide and an anchor are:

Eternal Diameter (mm)	L* (mm)							
	Single layer PPR				Three-layer FASER			
	Pipes that allow changes in length		Pipes that do not allow changes in length		Pipes that allow changes in length		Pipes that do not allow changes in length	
	Cold Water	Hot Water	Cold Water	Hot Water	Cold Water	Hot Water	Cold Water	Hot Water
16	750	400	600	250	975	520	780	325
20	800	500	700	300	1040	650	910	390
25	850	600	800	350	1105	780	1040	455
32	1000	650	900	400	1300	845	1170	520
40	1100	800	1100	500	1430	1040	1430	650
50	1250	1000	1250	600	1625	1300	1625	780
63	1400	1200	1400	750	1820	1560	1820	975
75	1500	1300	1500	900	1950	1690	1950	1170
90	1650	1450	1650	1100	2145	1885	2145	1430
110	1900	1600	1850	1300	2470	2080	2405	1690
125	2100	1850	2000	1400	2730	2405	2600	1820
160	2500	2300	2300	1800	3250	2990	2990	2340

* For vertical pipes, multiply by 1.3

HANDLING AND STORAGE

Resistance to ultraviolet light (UV)

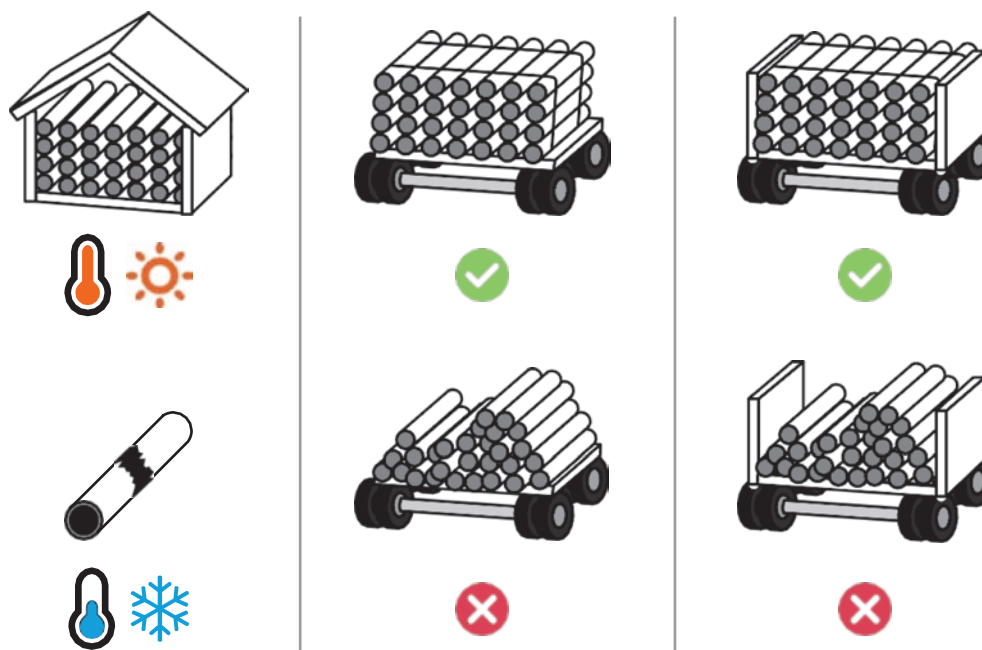
PPR must not be exposed to solar radiation. Even though stabilised against this radiation, continuous exposure causes degradation of the material, accelerating its ageing.

Strength at low temperatures

At temperatures below 0°C, PPR becomes fragile because it is a crystalline material. Therefore it is important to avoid any type of impact, especially during transport and handling. However, when installed, its plasticity is capable of absorbing changes in volume due to freezing of liquids flowing inside.

Arrangement of pipes

It is important to try to keep the pipes horizontal and to avoid their curvature as far as possible to prevent deformations that may make subsequent installation difficult



Bending

Because of the plasticity of the pipes, they allow a certain amount of bending. The maximum radius of curvature is 8 times the its diameter. If it is necessary to bend them, you can use hot air heaters, never direct heat, because this could destroy the molecular structure of the pipe.

Threaded components

In threaded female terminals, avoid conical caps because the threads can deteriorate. To ensure seal integrity, Teflon or similar can be used in suitable amounts.

POLYPROPYLENE PIPES PN16



PPR PIPE PN16 (SDR7.4)

AT6602016	20 x 2.8
AT6602516	25 x 3.5
AT6603216	32 x 4.4
AT6604016	40 x 5.5
AT6605016	50 x 6.9
AT6606316	63 x 8.6
AT6607516	75 x 10.3
AT6609016	90 x 12.3
AT6601016	110 x 15.1
AT6601216	125 x 17.1
AT6601616	160 x 21.9

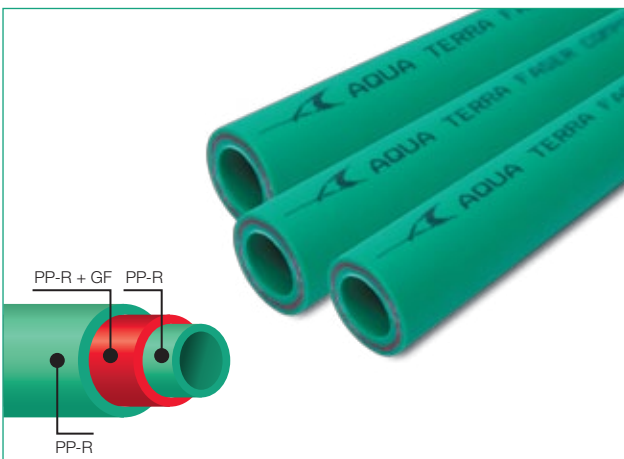
POLYPROPYLENE PIPES PN20



PPR PIPE PN20 (SDR6)

AT6602020	20 x 3.4
AT6602520	25 x 4.2
AT6603220	32 x 5.4
AT6604020	40 x 6.7
AT6605020	50 x 8.3
AT6606320	63 x 10.5
AT6607520	75 x 12.5
AT6609020	90 x 15.0
AT6601020	110 x 18.3
AT6601220	125 x 20.8
AT6601620	160 x 26.6

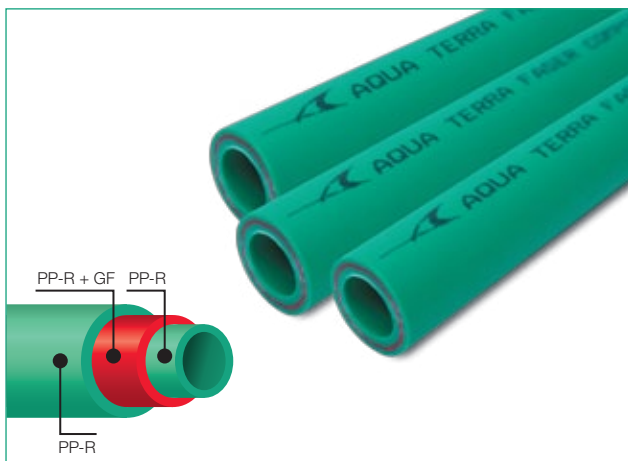
FASER COMPOSITE MULTILAYER PPR PIPES PN20



PPR PN20 (SDR7.4)

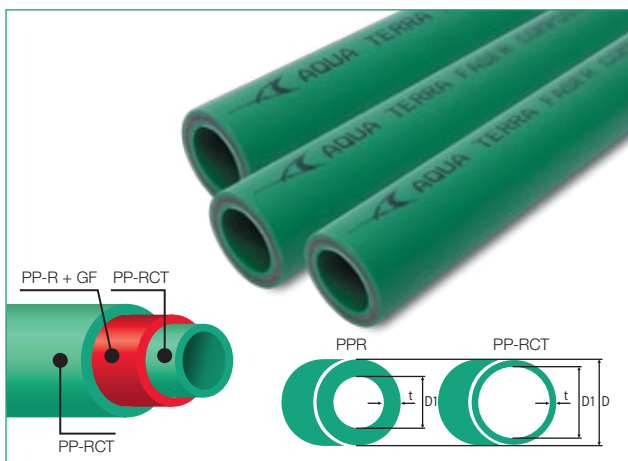
AT6612020	20 x 2.8
AT6612520	25 x 3.5
AT6613220	32 x 4.4
AT6614020	40 x 5.5
AT6615020	50 x 6.9
AT6616320	63 x 8.6
AT6617520	75 x 10.3
AT6619020	90 x 12.3
AT6611020	110 x 15.1
AT6611220	125 x 17.1
AT6611620	160 x 21.9

FASER COMPOSITE MULTILAYER PPR PIPES PN25



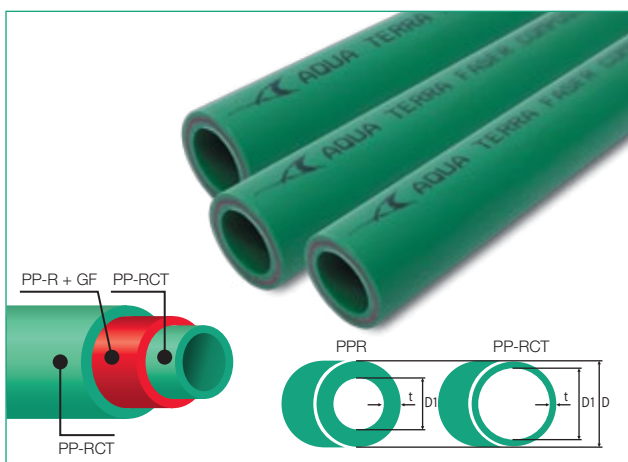
PPR PN25 (SDR6)	
AT6612025	20 x 3.4
AT6612525	25 x 4.2
AT6613225	32 x 5.4
AT6614025	40 x 6.7
AT6615025	50 x 8.3
AT6616325	63 x 10.5
AT6617525	75 x 12.5
AT6619025	90 x 15.0
AT6611025	110 x 18.3
AT6611225	125 x 20.8
AT6611625	160 x 26.6

FASER COMPOSITE MULTILAYER PP-RCT SDR9



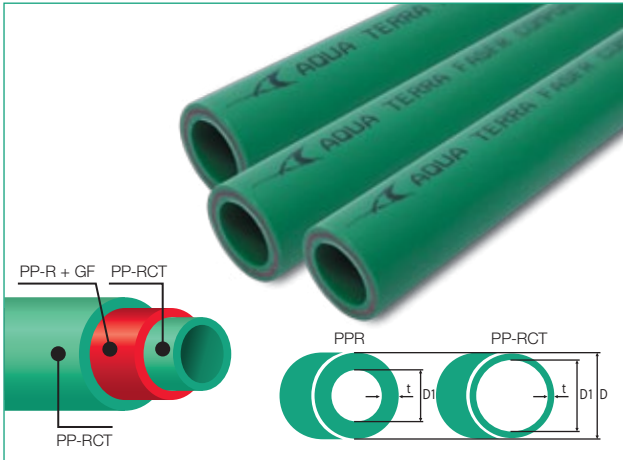
PP-RCT (SDR9)	
AT6622020	20 x 2.3
AT6622520	25 x 2.8
AT6623220	32 x 3.6
AT6624020	40 x 4.5
AT6625020	50 x 5.6
AT6626320	63 x 7.1
AT6627520	75 x 8.4
AT6629020	90 x 10.1
AT6621020	110 x 12.3
AT6621220	125 x 14
AT6621620	160 x 17.9

FASER COMPOSITE MULTILAYER PP-RCT PIPES SDR7.4



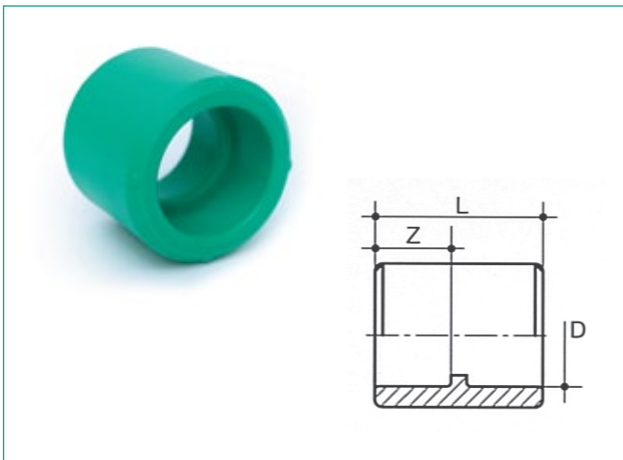
PP-RCT (SDR7.4)	
AT6622025	20 x 2.8
AT6622525	25 x 3.5
AT6623225	32 x 4.4
AT6624025	40 x 5.5
AT6625025	50 x 6.9
AT6626325	63 x 8.6
AT6627525	75 x 10.3
AT6629025	90 x 12.3
AT6621025	110 x 15.1
AT6621225	125 x 17.1
AT6621625	160 x 21.9

FASER COMPOSITE MULTILAYER PP-RCT PIPES SDR6

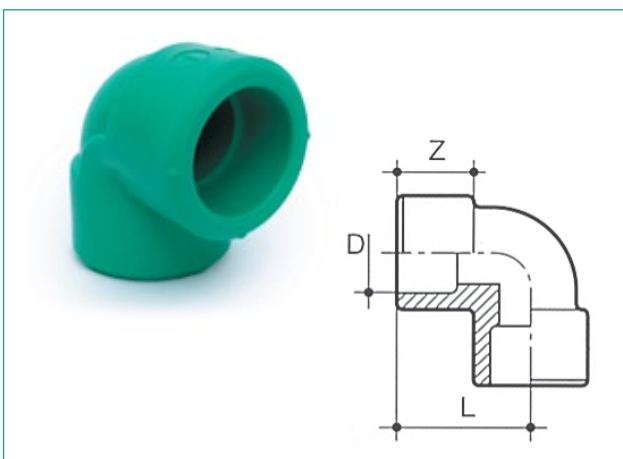


PP-RCT (SDR6)	
AT6622032	20 x 3.4
AT6622532	25 x 4.2
AT6623232	32 x 5.4
AT6624032	40 x 6.7
AT6625032	50 x 8.3
AT6626332	63 x 10.5
AT6627532	75 x 12.5
AT6629032	90 x 15.0
AT6621032	110 x 18.3
AT6621232	125 x 20.8
AT6621632	160 x 26.6

PPR FITTINGS

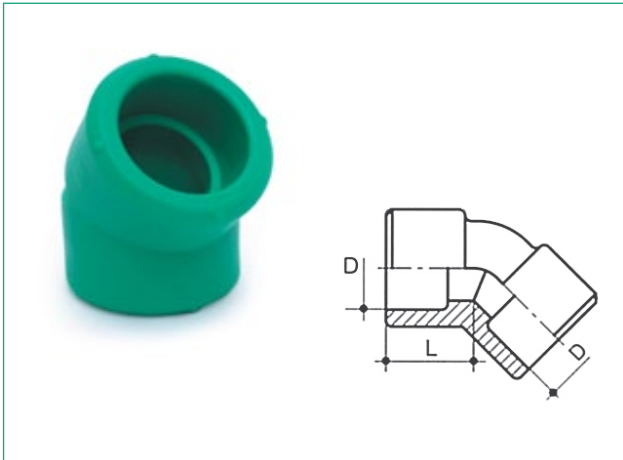


COUPLER				
CODE	D [mm]	Z [mm]	L [mm]	UNIT OF MEASURE
AT6554020	20	15	32	mm
AT6554025	25	16	35	mm
AT6554032	32	18	39	mm
AT6554040	40	21	44	mm
AT6554050	50	24	50	mm
AT6554063	63	28	58	mm
AT6554075	75	31	66	mm
AT6554090	90	36	89	mm
AT6554110	110	42	101	mm
AT6554125	125	47	90	mm
AT6554160	160	51	109	mm

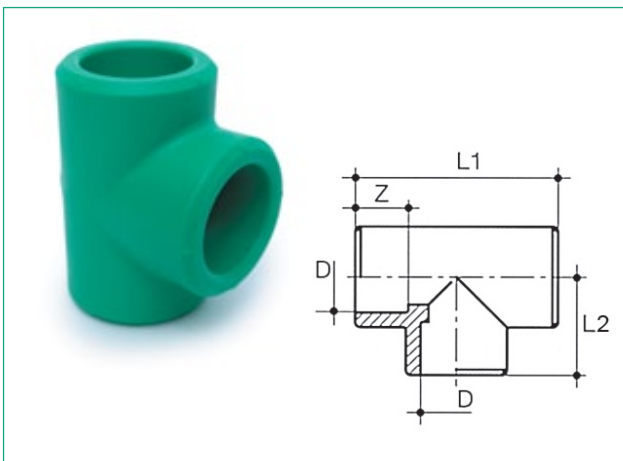


ELBOW 90°				
CODE	D [mm]	Z [mm]	L [mm]	UNIT OF MEASURE
AT6555020	20	19	26	mm
AT6555025	25	21	30	mm
AT6555032	32	24	35	mm
AT6555040	40	29	42	mm
AT6555050	50	34	50	mm
AT6555063	63	40	60	mm
AT6555075	75	46	70	mm
AT6555090	90	50	86	mm
AT6555110	110	56	105	mm
AT6555125	125	61	103	mm
AT6555160	160	61	111	mm

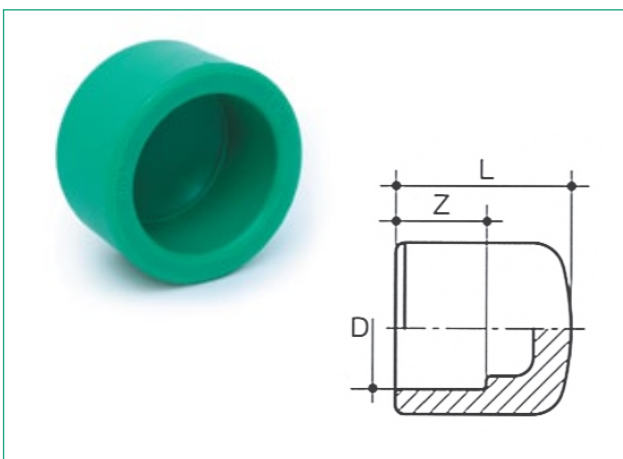
PPR FITTINGS



ELBOW 45°			
CODE	D [mm]	L [mm]	UNIT OF MEASURE
AT6556020	20	16	mm
AT6556025	25	18	mm
AT6556032	32	20	mm
AT6556040	40	23	mm
AT6556050	50	26	mm
AT6556063	63	31	mm
AT6556075	75	35	mm
AT6556090	90	35	mm
AT6556110	110	38	mm
AT6556125	125	40	mm
AT6556160	160	50	mm

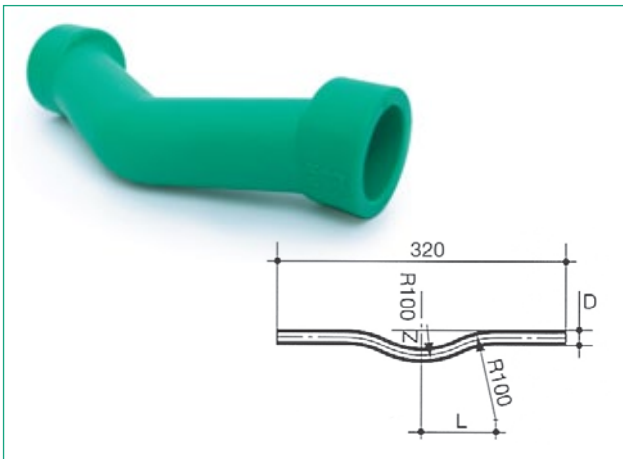


EQUAL TEE					
CODE	D [mm]	Z [mm]	L1 [mm]	L2 [mm]	UNIT OF MEASURE
AT6557020	20	15	54	27	mm
AT6557025	25	19	63	32	mm
AT6557032	32	25	76	38	mm
AT6557040	40	31	91	45	mm
AT6557050	50	39	109	55	mm
AT6557063	63	50	134	67	mm
AT6557075	75	59	156	78	mm
AT6557090	90	72	179	89	mm
AT6557110	110	98	210	105	mm
AT6557125	125	43	209	103	mm
AT6557160	160	109	218	113	mm

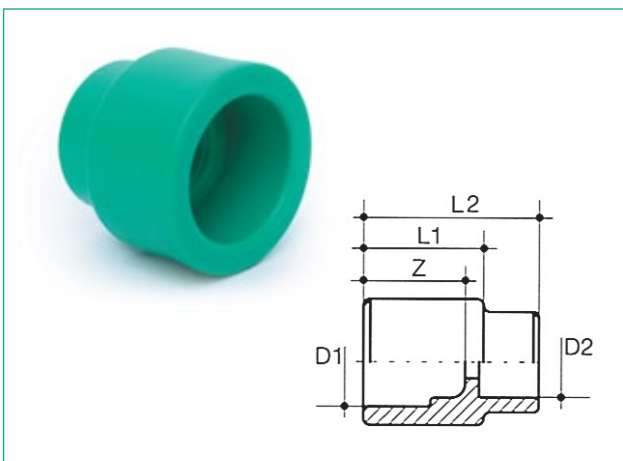


END CAPS				
CODE	D [mm]	Z [mm]	L [mm]	UNIT OF MEASURE
AT6665020	20	15	28	mm
AT6665025	25	16	32	mm
AT6665032	32	18	36	mm
AT6665040	40	21	42	mm
AT6665050	50	24	50	mm
AT6665063	63	28	58	mm
AT6665075	75	31	65	mm
AT6665090	90	37	72	mm
AT6665110	110	41	79	mm
AT6665125	125	43	82	mm
AT6665160	160	45	85	mm

PPR FITTINGS



CROSSOVER BEND				
CODE	D [mm]	Z [mm]	L [mm]	UNIT OF MEASURE
AT150020	20	22	86	mm
AT150025	25	27	93	mm
AT150032	32	34	101	mm

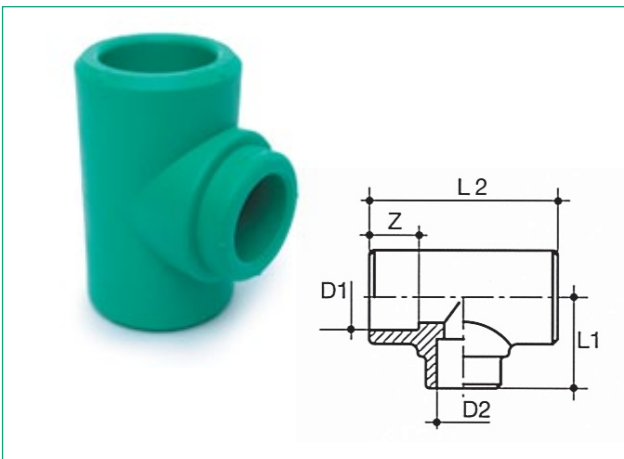


REDUCER						
CODE	D1 [mm]	D2 [mm]	Z [mm]	L1 [mm]	L2 [mm]	UNIT OF MEASURE
AT6562520	25	20	20	21	36	mm
AT6563220	32	20	22	25	40	mm
AT6563225	32	25	22	24	41	mm
AT6564020	40	20	26	31	43	mm
AT6564025	40	25	26	29	44	mm
AT6564032	40	32	26	27	45	mm
AT6565020	50	20	33	35	47	mm
AT6565025	50	25	32	35	48	mm
AT6565032	50	32	30	33	49	mm
AT6565040	50	40	30	32	51	mm
AT6566320	63	20	29	55	70	mm
AT6566325	63	25	34	41	54	mm
AT6566332	63	32	33	39	54	mm
AT6566340	63	40	33	38	55	mm
AT6566350	63	50	52	52	66	mm
AT6567532	75	32	34	54	76	mm
AT6567540	75	40	33	56	78	mm
AT6567550	75	50	36	45	67	mm
AT6567563	75	63	37	42	69	mm
AT6569050	90	50	37	60	87	mm
AT6569063	90	63	37	53	82	mm
AT6569075	90	75	37	45	78	mm
AT6561075	110	75	43	59	90	mm
AT6561090	110	90	46	56	86	mm
AT6561210	125	110	52	60	93	mm
AT6561610	160	110	58	69	100	mm
AT6561612	160	125	56	68	101	mm

PPR FITTINGS



PRESSURE TEST PLUG	
AT15520	1/2"
AT15525	3/4"



REDUCTION TEE						
CODE	D1 [mm]	D2 [mm]	Z [mm]	L1 [mm]	L2 [mm]	UNIT OF MEASURE
AT6572520	25	20	16	29	56	mm
AT6573220	32	20	18	33	60	mm
AT6573225	32	25	18	36	76	mm
AT6574020	40	20	20.5	38	66	mm
AT6574025	40	25	20.5	41	81	mm
AT6574032	40	32	20.5	43	91	mm
AT6575020	50	20	23.5	44	73	mm
AT6575025	50	25	23.5	45	76	mm
AT6575032	50	32	23.5	46	83.5	mm
AT6575040	50	40	23.5	48	91	mm
AT6576325	63	25	27.5	49	86	mm
AT6576332	63	32	27.5	51	90.4	mm
AT6576340	63	40	27.5	53	99	mm
AT6576350	63	50	27.5	57	109	mm
AT6577532	75	32	30	65	100.5	mm
AT6577540	75	40	30	66	109	mm
AT6577550	75	50	30	62	116	mm
AT6577563	75	63	30	66	128	mm
AT6579050	90	50	33	75	127	mm
AT6579063	90	63	33	74	136	mm
AT6579075	90	75	33	78	146	mm
AT6571075	110	75	37	87	155	mm
AT6571090	110	90	37	91	170	mm
AT6571610	160	110	46	123	207	mm

PPR FITTINGS



PLASTIC UNION		
CODE	D [mm]	UNIT OF MEASURE
AT16020	20	mm
AT16025	25	mm
AT16032	32	mm
AT16040	40	mm
AT16050	50	mm
AT16063	63	mm



FEMALE ADAPTOR		
NICKEL PLATED	DZR/BRASS	
AT7052012	DZR7052012	20 x 1/2"F
AT7052034	DZR7052034	20 x 3/4"F
AT7052512	DZR7052512	25 x 1/2"F
AT7052534	DZR7052534	25 x 3/4"F
AT7053201	DZR7053201	32 x 1"F
AT7054014	DZR7054014	40 x 1 1/4"F
AT7055012	DZR7055012	50 x 1 1/2"F
AT7056302	DZR7056302	63 x 2"F
AT7057512	DZR7057512	75 x 2 1/2"F
AT7059003	DZR7059003	90 x 3"F



MALE ADAPTOR		
NICKEL PLATED	DZR/BRASS	
AT7062012	DZR7062012	20 x 1/2"M
AT7062034	DZR7062034	20 x 3/4"M
AT7062512	DZR7062512	25 x 1/2"M
AT7062534	DZR7062534	25 x 3/4"M
AT7063201	DZR7063201	32 x 1"M
AT7064014	DZR7064014	40 x 1 1/4"M
AT7065012	DZR7065012	50 x 1 1/2"M
AT7066302	DZR7066302	63 x 2"M
AT7067512	DZR7067512	75 x 2 1/2"M
AT7069003	DZR7069003	90 x 3"M

PPR FITTINGS



FEMALE ELBOW 90°		
NICKEL PLATED	DZR/BRASS	
AT7082012	DZR7082012	20 x 1/2"F
AT7082512	DZR7082512	25 x 1/2"F
AT7082534	DZR7082534	25 x 3/4"F
AT7083234	DZR7083234	32 x 3/4"F
AT7083201	DZR7083201	32 x 1"F



MALE ELBOW 90°		
NICKEL PLATED	DZR/BRASS	
AT7092012	DZR7092012	20 x 1/2"M
AT7092512	DZR7092512	25 x 1/2"M
AT7092534	DZR7092534	25 x 3/4"M
AT7093201	DZR7093201	32 x 1"M



FEMALE ELBOW 90° WITH WALL BRACKET		
NICKEL PLATED	DZR/BRASS	
AT722012	DZR722012	20 x 1/2"F
AT722512	DZR722512	25 x 1/2"F



MALE ELBOW 90° WITH WALL BRACKET		
NICKEL PLATED	DZR/BRASS	
AT732012	DZR732012	20 x RP1/2"M
AT732512	DZR732512	25 x RP1/2"M

PPR FITTINGS



FEMALE TEE		
NICKEL PLATED	DZR/BRASS	
AT7102012	DZR7102012	20 x 1/2"F
AT7102034	DZR7102034	20 x 3/4"F
AT7102512	DZR7102512	25 x 1/2"F
AT7102534	DZR7102534	25 x 3/4"F
AT7103234	DZR7103234	32 x 3/4"F
AT7103236	DZR7103236	32 x 1/2"F



MALE TEE		
NICKEL PLATED	DZR/BRASS	
AT7122012	DZR7122012	20 x 1/2"M
AT7122034	DZR7122034	20 x 3/4"M
AT7122512	DZR7122512	25 x 1/2"M
AT7122534	DZR7122534	25 x 3/4"M
AT7123212	DZR7123212	32 x 1/2"M
AT7123234	DZR7123234	32 x 3/4"M



FEMALE ADAPTOR UNION		
NICKEL PLATED	DZR/BRASS	
AT7132012	DZR7132012	20 x 1/2"F
AT7132534	DZR7132534	25 x 3/4"F
AT7133201	DZR7133201	32 x 1"F
AT7134014	DZR7134014	40 x 1 1/4"F
AT7135012	DZR7135012	50 x 1 1/2"F
AT7136302	DZR7136302	63 x 2"F



MALE ADAPTOR UNION		
NICKEL PLATED	DZR/BRASS	
AT7112012	DZR7112012	20 x 1/2"M
AT7112534	DZR7112534	25 x 3/4"M
AT7113201	DZR7113201	32 x 1"M
AT7114014	DZR7114014	40 x 1 1/4"M
AT7115012	DZR7115012	50 x 1 1/2"M
AT7116302	DZR7116302	63 x 2"M

PPR FITTINGS



CONCEALED STOP VALVE	
AT77820	20 mm
AT77825	25 mm
AT77832	32 mm



STOP VALVE	
AT80020	20 mm
AT80025	25 mm
AT80032	32 mm
AT80040	40 mm
AT80050	50 mm
AT80063	63 mm



STOP VALVE	
AT81020	20 mm
AT81025	25 mm
AT81032	32 mm
AT81040	40 mm
AT81050	50 mm
AT81063	63 mm



FLANGE + FLANGE ADAPTOR	
AT90063	63 mm
AT90075	75 mm
AT90090	90 mm
AT90110	110 mm
AT90125	125 mm
AT90160	160 mm

PPR FITTINGS



PLASTIC CLAMP	
AT10020	20 mm
AT10025	25 mm
AT10032	32 mm



PIPE CUTTER	
982040	20 - 40 mm
985110	50 - 110 mm



WELDING MACHINE	
9002063	20 - 63 mm
9075110	75 - 110 mm
9125160	125 - 160 mm

Das Kunststoff-Zentrum **SKZ**

Test report no.: 11388/14

DVGW file no.: 14-0599-W (2014/13/14)

Customer/production site: Aquagas Plastic Industries
Dubai Investment Park 2
P.O. Box 56790
DUBAI
UNITED ARAB EMIRATES

Order: Initial type test on green coloured pipes made of PP-R, SDR 6 (S 2.5) groups 1 and 2, according to DVGW work sheet W 544 (May 2007) "flexible pipes in the drinking water installation - requirements and testing"

Model name: AQUATERRA

Summary of test results: see paragraph 3

Letter of: 2015-05-23 Ref: Terec Unruhshon

Receipt of samples: 2015-04-29 Sampling: —

Test period: from 2015-05-08 to 2015-05-20

This test report comprises 8 pages.

Widening: 2016-07-05
Scheit

Dr. Aron Zehn

Dr. Martin Schulz

DAKS

TZW
Technische Zentrale Wasser

Technische Zentrale Wasser - Wasserwerke e. V. 50171 Kassel

AquaGas Plastic Industries LLC
PO Al Nahd Faisal
Street 30, Community 507, Dubai Investment Park-2
P.O. Box 56790
DUBAI
UAE

For address: email: a-mail@tzw.de
Tel: +49 561 801-100
Fax: +49 561 801-100
E-Mail: a-mail@tzw.de

11.10.2018

Testing according to the „Guideline for the Hygienic Assessment of Organic Materials in Contact with Drinking Water (GTW Guidelines)“ of Umweltbundesamt (UBA) (Bun-
desgesundheitsblatt current version)

Dear Mr. Faisal:
The samples of your PP-R quality "AQUA TERRA PP-R/CT FITTINGS (ø 25 mm) produced with Borealis RA3700-GR" announced in your letter mentioned above, your order of 12.09.2018, P.O. no. 204, invoice No. RQ2/17, arrived here on 14.09.2018. Tests were performed as ordered according to GTW guideline of Umweltbundesamt (UBA) (Bun-
desgesundheitsblatt current version).

The results are given in the adjacent test certificate.
Additionally, please find attached our invoice.

Best regards
Technische Zentrale Wasser
Prof. Dr. Ingrid Unruhshon

Dr. J. Klingner | Dr.-Ing. R. Turkow
Head of the Test Centre

WRAS
WRAS APPROVED MATERIALS

Water Regulations Advisory Scheme Ltd
100 Victoria Road
Wotton Bassett
Reading RG26 2AB
UK

10th June 2015
Aquagas Plastic Industries LLC
P.O. Box 56790
Dubai
UAE

WATER REGULATIONS ADVISORY SCHEME (WRAS) MATERIALS CERTIFICATE

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6755:1:2005 under the 2010 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 substance referred to in this letter is suitable for the quality of the water with which it may come into contact and does not require the approval of the manufacturer or physical properties for any use.

POLYPROPYLENE - COMPONENTS 000

Material: PP-R Pipe, Green coloured, extruded PP-R pipe. For use with water up to 60°C.

APPROVAL NUMBER: WRAS01
APPROVAL HOLDER: AQUAGAS PLASTIC INDUSTRIES LLC

The Scheme reserves the right to re-assess approval.
Approval: WRAS01 is a valid approval from 20th May 2014.

An entry on this list, and approval by inclusion in the Water Fittings Directory are not under the control holder. Materials which have passed UK tests of effect to water quality.

The Directory may be found at www.wras.co.uk

Yours faithfully
James Forman
Approval & Enquiries Manager
Water Regulations Advisory Scheme

Certification made simple™

Certificate of Registration
Presented to
AQUAGAS Plastic Industries L.L.C.
P.O. Box 56790, Dubai Investment Park - 2, Dubai, United Arab Emirates
(ISO Certified Company)

ISO 14001:2015 Environmental Management System

Legal Status: Limited Liability Company
Certificate ID: AE-19-3003296
Registration Term: 10 years (subject to annual audits to confirm the continued satisfactory operation of the organization's Management System)
Initial Registration: 28th June 2018
This Certificate issued: 28th May 2019
Certificate valid to: 27th June 2020
Scope of Certification: Manufacturer of "AQUATERRA" PP-R Pipes and Fittings and "PPETERRA" Pipes and Fittings

DAKS

ATTESTATION OF CONFORMITY

ISSUED TO: AQUA GAS PLASTIC INDUSTRIES LLC
P.O. Box 56790, Dubai Investment Park 2, Dubai, UAE

PRODUCTS DESCRIPTION: PP-R Aqua SDR 6 PN 20 "AQUA TERRA" 10 mm to 160 mm

MANUFACTURED BY: AQUA GAS PLASTIC INDUSTRIES LLC
P.O. Box 56790, Dubai Investment Park 2, Dubai, UAE

APPLICABLE STANDARD(S) / REQUIREMENTS: DVGW Type Examination as per DVGW W 544, 01.05.2007; UBA GTW (07.09.2006); DVGW W 270 01.11.2007

CONFORMITY CERTIFICATE DETAILS: CERTIFICATE NUMBER: DW-81170800 / DW-81170803
CERTIFICATE TITLE: DVGW TYPE EXAMINATION CERTIFICATE
ISSUED BY: DVGW CERT GmbH
ISSUED TO: AQUA GAS PLASTIC INDUSTRIES
EVALUATION REPORT NO: 84230802A

ATTESTATION
Dubai Central Laboratory Department hereby attests that the product(s) described above conforms to the requirements of the applicable standard specifications / requirements.
This attestation is based solely on the review and verification of the validity and authenticity of the Product Conformity Certificate and on an Evaluation Report as mentioned above. This attestation shall not be used when the Product Conformity Certificate becomes invalid at any time.

AMF HUSAINI, MAZDOOQ
Products Conformity Assessment Section Manager
Dubai Central Laboratory Department

Attestation No: W43000001
Original Issue Date: 06 March 2018
Current Issue Date: 06 March 2019
Valid Up To: 01 March 2021

DVGW
CERT

DVGW-Baumusterprüfzertifikat
DVGW type examination certificate

Anwendungsbereich: Produkte der Wasserversorgung
Zertifizierter Hersteller: Aquagas Plastic Industries
Vertriebler: Aquagas Plastic Industries
Produktart: Kunststoffrohre für die Trinkwasserinstallation PP-R, SDR 6 (R17)
Modellname: AQUATERRA
Prüfverfahren: Baumusterprüfung 11388/14 vom 07.07.2010 (D44)
Prüfungsdatum: 08.20019 vom 10.09.2018 (TZW)
Prüfungsdatum: DVGW W 544 (01.05.2007)
Prüfungsdatum: UBA GTW (07.09.2006)
Prüfungsdatum: DVGW W 270 (01.11.2007)

Abkürzung / AZ: 05.07.2021 / 14-0599-WINE

DAKS

UNITED ARAB EMIRATES
MINISTRY OF INFRASTRUCTURE DEVELOPMENT

الإمارات العربية المتحدة
وزارة البنية التحتية والتطوير

Supplier Certificate

رقم التسجيل / Registration No: PQ-25817
الاسم التجاري / Commercial Name: AQUAGAS PLASTIC INDUSTRIES L.L.C
العنوان / Address: دبي / Dubai
الرقم / Phone: (34) 832-9188
ص.ب. / P.O. Box: 56790
الفاكس / Fax: 342674183
مجال التسجيل / Registration Field: Pipelines

التاريخ / Issue Date: 11/11/2018
تاريخ الانتهاء / Expiry Date: 10/11/2019
رقم التسجيل و التاريخ / Receipt No. & Date: 180081517466 23/10/2018

NSF International
799 N. Dushore Road, Ann Arbor, MI 48103 USA

RECOGNIZES
Aqua Gas Plastic Industries- AQUATERRA
United Arab Emirates

AS COMPLYING WITH NSF/ANSI 61 AND ALL APPLICABLE REQUIREMENTS, PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE AUTHORIZED TO BEAR THE NSF MARK.

NSF

NSF/ANSI 61
NSF/ANSI 308

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NSF/ANSI 308



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