

# polypropylene pipe availability - PP-H

## Metric Sizes DIN 8077/8078

Size	Series SDR Working Pressure	Ventilation -	S-20 SDR41 PN2.5	S-16 SDR33 PN3.2	S-12.5 SDR26 PN4	S-8.3 SDR17.6 PN6	S-5 SDR11 PN10	S-3.2 SDR7.4 PN16
10	O.D. (mm) Wall (mm) Weight/m (kg)							
12	O.D. (mm) Wall (mm) Weight/m (kg)							12 2.0 0.06
16	O.D. (mm) Wall (mm) Weight/m (kg)						16 1.8 0.08	
20	O.D. (mm) Wall (mm) Weight/m (kg)						20 1.9 0.14	20 2.8 0.15
25	O.D. (mm) Wall (mm) Weight/m (kg)						25 2.3 0.16	25 3.5 0.23
32	O.D. (mm) Wall (mm) Weight/m (kg)					32 2.0 0.17	32 2.9 0.26	32 4.4 0.37
40	O.D. (mm) Wall (mm) Weight/m (kg)				40 1.8 0.22	40 2.3 0.27	40 3.7 0.41	40 5.5 0.58
50	O.D. (mm) Wall (mm) Weight/m (kg)				50 2.0 0.30	50 2.9 0.42	50 4.6 0.64	50 6.9 0.90
63	O.D. (mm) Wall (mm) Weight/m (kg)				63 2.5 0.47	63 3.6 0.66	63 5.8 1.01	63 8.6 1.41
75	O.D. (mm) Wall (mm) Weight/m (kg)			75 2.3 0.52	75 2.9 0.65	75 4.3 0.93	75 6.8 1.40	75 10.3 2.00
90	O.D. (mm) Wall (mm) Weight/m (kg)			90 2.8 0.76	90 3.5 0.94	90 5.1 1.32	90 8.2 2.02	90 12.3 2.86
110	O.D. (mm) Wall (mm) Weight/m (kg)		110 2.7 0.90	110 3.4 1.11	110 4.2 1.36	110 6.3 1.98	110 10.0 3.01	110 15.1 4.29
125	O.D. (mm) Wall (mm) Weight/m (kg)		125 3.1 1.17	125 3.9 1.45	125 4.8 1.76	125 7.1 2.54	125 11.4 3.89	125 17.1 5.52
140	O.D. (mm) Wall (mm) Weight/m (kg)		140 3.5 1.48	140 4.3 1.78	140 5.4 2.21	140 8.0 3.20	140 12.7 4.87	140 19.2 6.93
160	O.D. (mm) Wall (mm) Weight/m (kg)		160 4.0 1.91	160 4.9 2.32	160 6.2 2.89	160 9.1 4.15	160 14.6 6.38	160 21.9 9.04
180	O.D. (mm) Wall (mm) Weight/m (kg)		180 4.4 2.36	180 5.5 2.94	180 6.9 3.63	180 10.2 5.22	180 16.4 6.05	
200	O.D. (mm) Wall (mm) Weight/m (kg)	200 3.0 1.83	200 4.9 2.92	200 6.2 3.65	200 7.7 4.50	200 11.4 6.47	200 18.2 9.92	
225	O.D. (mm) Wall (mm) Weight/m (kg)		225 5.5 3.70	225 6.9 4.57	225 8.6 5.65	225 12.8 8.19	225 20.5 12.60	
250	O.D. (mm) Wall (mm) Weight/m (kg)	250 3.5 2.66	250 6.2 4.59	250 7.7 5.67	250 9.6 6.99	250 14.2 10.10	250 22.7 15.50	
280	O.D. (mm) Wall (mm) Weight/m (kg)		280 6.9 5.73	280 8.6 7.09	280 10.7 8.72	280 15.9 12.60	280 25.4 19.40	
315	O.D. (mm) Wall (mm) Weight/m (kg)	315 5.0 4.74	315 7.7 7.19	315 9.7 8.97	315 12.1 11.10	315 17.9 16.00	315 28.6 24.60	
355	O.D. (mm) Wall (mm) Weight/m (kg)	355 6.0 6.39	355 8.7 9.14	355 10.9 11.30	355 13.6 14.00	355 20.1 20.20	355 32.2 31.10	
400	O.D. (mm) Wall (mm) Weight/m (kg)	400 6.0 7.20	400 9.8 11.60	400 12.3 14.40	400 15.3 17.70	400 22.7 25.70		
450	O.D. (mm) Wall (mm) Weight/m (kg)	450 6.0 8.10	450 11.0 14.60	450 13.8 18.20	450 17.2 22.40	450 25.5 32.50		
500	O.D. (mm) Wall (mm) Weight/m (kg)	500 8.0 11.90	500 12.3 18.10	500 15.3 22.30	500 19.1 27.60	500 28.3 40.10		
560	O.D. (mm) Wall (mm) Weight/m (kg)	560 8.0 13.41	560 13.7 22.60	560 17.2 28.10	560 21.4 34.60	560 31.7 50.30		
630	O.D. (mm) Wall (mm) Weight/m (kg)	630 10.0 18.80	630 15.4 28.50	630 19.3 35.50	630 24.1 43.90	630 35.7 63.70		
710	O.D. (mm) Wall (mm) Weight/m (kg)	710 12.0 25.30	710 17.4 36.30	710 21.8 45.20	710 27.2 55.80			
800	O.D. (mm) Wall (mm) Weight/m (kg)	800 12.0 28.60	800 19.6 46.10	800 24.5 57.20	800 30.6 70.80			
900	O.D. (mm) Wall (mm) Weight/m (kg)	900 15.0 40.10	900 22.0 58.10	900 27.6 72.50	900 34.4 89.40			
1000	O.D. (mm) Wall (mm) Weight/m (kg)	1000 15.0 44.60	1000 24.5 72.00	1000 30.6 89.20	1000 38.2 110.00			
1200	O.D. (mm) Wall (mm) Weight/m (kg)	1200 18.0 64.10	1200 29.4 103.00	1200 36.7 128.00				
1400	O.D. (mm) Wall (mm) Weight/m (kg)	1400 20.0 83.20	1400 34.3 141.00					

# polypropylene pipe availability - PP-R and special grades

Metric Sizes DIN 8077/8078		PP-R	PPs: Flame Retardent				PPS-ESD-el			
Size	Series SDR Working Pressure	S-5 SDR11 PN10	Ventilation -	S-20 SDR41 PN2.5	S-16 SDR33 PN3.2	S-5 SDR11 PN10	Ventilation -	S-16 SDR33 PN3.2	S-8.3 SDR17.6 PN6	S-5 SDR11 PN10
20	O.D. (mm) Wall (mm) Weight/m (kg)	20 1.9 0.11				20 1.9 0.12				
25	O.D. (mm) Wall (mm) Weight/m (kg)	25 2.3 0.16				25 2.3 0.17				
32	O.D. (mm) Wall (mm) Weight/m (kg)	32 2.9 0.26				32 2.9 0.27				32 2.9 0.32
40	O.D. (mm) Wall (mm) Weight/m (kg)	40 3.7 0.41				40 3.7 0.42				
50	O.D. (mm) Wall (mm) Weight/m (kg)	50 4.6 0.64				50 4.6 0.65				50 4.6 0.79
63	O.D. (mm) Wall (mm) Weight/m (kg)	63 5.8 1.01			63 2.0 0.39	63 5.8 1.03				63 5.8 1.25
75	O.D. (mm) Wall (mm) Weight/m (kg)	75 6.8 1.40		75 1.9 0.45		75 6.8 1.44				75 6.8 1.74
90	O.D. (mm) Wall (mm) Weight/m (kg)	90 8.2 2.02		90 2.2 0.62		90 8.2 2.08		90 2.8 0.93		90 8.2 2.52
110	O.D. (mm) Wall (mm) Weight/m (kg)	110 10.0 3.01		110 2.7 0.92		110 10.0 3.09	110 3.0 1.23		110 6.3 2.47	110 10 3.74
125	O.D. (mm) Wall (mm) Weight/m (kg)	125 11.4 3.89		125 3.1 1.20						
140	O.D. (mm) Wall (mm) Weight/m (kg)	140 12.7 4.87	140 3.0 1.32			140 12.7 4.99				
160	O.D. (mm) Wall (mm) Weight/m (kg)	160 14.6 6.38	160 3.0 1.53			160 14.6 6.55	160 3.0 1.81	160 4.9 2.88	160 9.1 5.18	
180	O.D. (mm) Wall (mm) Weight/m (kg)	180 16.4 8.05	180 3.0 1.71				180 3.0 2.04			
200	O.D. (mm) Wall (mm) Weight/m (kg)	200 18.2 9.92	200 3.0 1.90				200 3.0 2.27	200 6.2 4.57	200 11.4 8.07	
225	O.D. (mm) Wall (mm) Weight/m (kg)	225 20.5 12.60	225 3.5 2.47				225 3.5 2.98	225 6.9 5.68		
250	O.D. (mm) Wall (mm) Weight/m (kg)	250 22.7 15.50	250 3.5 2.75				250 3.5 3.32			
280	O.D. (mm) Wall (mm) Weight/m (kg)	280 25.4 19.40	280 4.0 3.48							
315	O.D. (mm) Wall (mm) Weight/m (kg)	315 28.6 24.60	315 5.0 4.91				315 5.0 5.88	315 9.7 11.14		
355	O.D. (mm) Wall (mm) Weight/m (kg)		355 5.0 5.54				355 5.0 6.60			
400	O.D. (mm) Wall (mm) Weight/m (kg)	400 36.3 39.5	400 6.0 7.39				400 6.0 8.94			
450	O.D. (mm) Wall (mm) Weight/m (kg)	450 40.9 50.10	450 6.0 8.33							
500	O.D. (mm) Wall (mm) Weight/m (kg)	500 45.4 61.8	500 8.0 12.3							
560	O.D. (mm) Wall (mm) Weight/m (kg)		560 8.0 13.8							
630	O.D. (mm) Wall (mm) Weight/m (kg)		630 10.0 19.3							
710	O.D. (mm) Wall (mm) Weight/m (kg)	710* 40.2 80.7	710 12.0 26.0							
800	O.D. (mm) Wall (mm) Weight/m (kg)	800* 45.3 103.0	800 12.0 29.30							
900	O.D. (mm) Wall (mm) Weight/m (kg)		900 15.0 41.2							
1000	O.D. (mm) Wall (mm) Weight/m (kg)		1000 15.0 45.9							
1200	O.D. (mm) Wall (mm) Weight/m (kg)		1200 18.0 65.8							

\* SDR 17



PP-H Homopolymer Pipe

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Ventilation			PN2.5/S-20/SDR41		PN3.2/S-16/SDR33		PN4/S-12.5/SDR26		
Size	Wall	Code	Price/m	Code	Price/m	Code	Price/m	Code	Price/m
40	-	-	-	-	-	-	-	12 705 0040 26	2.56
50	3.0	12 705 0050 00	- on application	-	-	12 705 0050 33	3.36	12 705 0050 26	3.47
63	3.0	12 705 0063 00	- on application	12 705 0063 41	4.05	12 705 0063 33	4.65	12 705 0063 26	5.47
75	3.0	12 705 0075 00	- on application	12 705 0075 41	5.07	12 705 0075 33	6.32	12 705 0075 26	7.41
90	3.0	12 705 0090 00	- on application	12 705 0090 41	7.06	12 705 0090 33	9.17	12 705 0090 26	10.80
110	3.0	12 705 0110 00	- on application	12 705 0110 41	10.33	12 705 0110 33	13.43	12 705 0110 26	15.68
125	3.0	12 705 0125 00	- on application	12 705 0125 41	13.83	12 705 0125 33	17.58	12 705 0125 26	20.28
140	3.0	12 705 0140 00	- on application	12 705 0140 41	17.29	12 705 0140 33	21.49	12 705 0140 26	25.38
160	3.0	12 705 0160 00	- on application	12 705 0160 41	21.79	12 705 0160 33	28.05	12 705 0160 26	33.26
180	3.0	12 705 0180 00	- on application	12 705 0180 41	27.62	12 705 0180 33	35.51	12 705 0180 26	41.72
200	3.0	12 705 0200 00	24.05	12 705 0200 41	33.44	12 705 0200 33	44.07	12 705 0200 26	51.68
225	3.5	12 705 0225 00	- on application	12 705 0225 41	42.46	12 705 0225 33	55.06	12 705 0225 26	64.86
250	3.5	12 705 0250 00	34.95	12 705 0250 41	59.26	12 705 0250 33	68.46	12 705 0250 26	80.25
280	4.0	12 705 0280 00	- on application	12 705 0280 41	71.05	12 705 0280 33	92.76	12 705 0280 26	108.61
315	5.0	12 705 0315 00	62.21	12 705 0315 41	89.83	12 705 0315 33	117.38	12 705 0315 26	138.31
355	6.0	12 705 0355 00	75.37	12 705 0355 41	119.33	12 705 0355 33	155.68	12 705 0355 26	183.61
400	6.0	12 705 0400 00	94.53	12 705 0400 41	152.20	12 705 0400 33	198.29	12 705 0400 26	232.10
450	6.0	12 705 0450 00	125.36	12 705 0450 41	227.38	12 705 0450 33	294.99	12 705 0450 26	345.74
500	8.0	12 705 0500 00	183.61	12 705 0500 41	278.11	12 705 0500 33	361.06	12 705 0500 26	425.64
560	10.0	12 705 0560 00	256.60	12 705 0560 41	348.55	12 705 0560 33	455.77	12 705 0560 26	533.64
630	10.0	12 705 0630 00	290.35	12 705 0630 41	441.56	12 705 0630 33	575.15	12 705 0630 26	677.40
710	12.0	12 705 0710 00	390.85	12 705 0710 41	561.84	12 705 0710 33	732.00	12 705 0710 26	860.61
800	12.0	12 705 0800 00	429.51	12 705 0800 41	711.24	12 705 0800 33	926.35	12 705 0800 26	1091.74
900	15.0	12 705 0900 00	653.93	12 705 0900 41	947.03	12 705 0900 33	1241.03	12 705 0900 26	1458.17
1000	15.0	12 705 1000 00	727.21	12 705 1000 41	1168.79	12 705 1000 33	1527.12	12 705 1000 26	1794.50
1200	18.0	12 705 1200 00	1103.00	12 705 1200 41	1175.71	12 705 1200 33	2310.40	-	-
1400	20.0	12 705 1400 00	1499.49	12 705 1400 41	2540.51	-	-	-	-

Standard length 5m

Please note that a transportation surcharge may be applied on pipe diameters 250mm or larger - please enquire for details.

Electrofusion Coupling



Manufactured from PP-H (Homopolymer) material

PN10 (SDR 11)

Size	Code	Voltage	Price
20	11 173 0020 11	18	14.31
25	11 173 0025 11	24	16.26
32	11 173 0032 11	26	17.58
40	11 173 0040 11	28	18.45
50	11 173 0050 11	32	28.61
63	11 173 0063 11	30	30.00
75	11 173 0075 11	30	42.05
90	11 173 0090 11	32	56.25
110	11 173 0110 11	32	68.46
125	11 173 0125 11	32	96.88
140	11 173 0140 11	34	109.50
160	11 173 0160 11	32	125.50
180*	11 173 0180 11	40	184.28
200	11 173 0200 11	38	213.08
225	11 173 0225 11	34	262.40
250	11 173 0250 11	38	691.14
280*	11 173 0280 11	40	936.89
315	11 173 0315 11	38	1116.15
355	11 173 0355 11	38	1195.48

\* Special order only



Temperature De-Rating Factors

Pressure ratings for Polypropylene pipework systems are always quoted at 20°C. As working temperature increases, the maximum working pressure decreases by the factor indicated.

\* For continuous use at these temperatures, consult our Customer Services Department

Working Temperature (°C)	Pressure De-Rating Factor
20	1.00
30	1.00
40	0.82
50	0.66
60	0.50
70	0.36
80	0.25
90*	0.13
100*	0.05

This data is provided for guidance only. For specific projects please contact our technical department

## PP-H Homopolymer Pipe

## PP-R Copolymer Pipe

PN6/S-8.3/SDR17.6			PN10/S-5/SDR11		PN16/S-3.2/SDR7.4		PN10/S-5/SDR 11		
Size	Code	Price/m	Code	Price/m	Code	Price/m	Size	Code	Price/m
10	-	-	-	-	-	-	20	11 705 0020 11	
12	-	-	-	-	12 705 0012 07	1.23	25	11 705 0025 11	
16	-	-	12 705 0016 11	1.22	12 705 0016 07	1.76	32	11 705 0032 11	
20	-	-	12 705 0020 11	2.18	12 705 0020 07	2.29	40	11 705 0040 11	
25	-	-	12 705 0025 11	2.87	12 705 0025 07	3.45	50	11 705 0050 11	
32	12 705 0032 17	2.77	12 705 0032 11	4.05	12 705 0032 07	5.73	63	11 705 0063 11	
40	12 705 0040 17	3.27	12 705 0040 11	5.04	12 705 0040 07	7.02	75	11 705 0075 11	
50	12 705 0050 17	5.11	12 705 0050 11	7.83	12 705 0050 07	10.85	90	11 705 0090 11	
63	12 705 0063 17	7.98	12 705 0063 11	12.14	12 705 0063 07	17.05	110	11 705 0110 11	
75	12 705 0075 17	11.34	12 705 0075 11	16.88	12 705 0075 07	24.29	125	11 705 0125 11	on application
90	12 705 0090 17	15.68	12 705 0090 11	24.29	12 705 0090 07	34.55	140	11 705 0140 11	
110	12 705 0110 17	24.29	12 705 0110 11	33.93	12 705 0110 07	51.70	160	11 705 0160 11	
125	12 705 0125 17	31.38	12 705 0125 11	47.17	12 705 0125 07	66.51	180	11 705 0180 11	
140	12 705 0140 17	38.67	12 705 0140 11	59.19	12 705 0140 07	83.66	200	11 705 0200 11	
160	12 705 0160 17	50.70	12 705 0160 11	77.11	12 705 0160 07	108.93	225	11 705 0225 11	
180	12 705 0180 17	62.75	12 705 0180 11	97.66	-	-	250	11 705 0250 11	
200	12 705 0200 17	78.33	12 705 0200 11	119.39	-	-	280	11 705 0280 11	
225	12 705 0225 17	98.86	12 705 0225 11	151.91	12 705 0225 07	260.20	315	11 705 0315 11	
250	12 705 0250 17	121.74	12 705 0250 11	186.85			400	11 705 0400 11	
280	12 705 0280 17	164.93	12 705 0280 11	255.52			450	11 705 0450 11	
315	12 705 0315 17	210.14	12 705 0315 11	322.59			500	11 705 0500 11	
355	12 705 0355 17	280.16	12 705 0355 11	430.12			710*	11 705 0710 17	
400	12 705 0400 17	354.18					800*	11 705 0800 17	
450	12 705 0450 17	526.82							
500	12 705 0500 17	649.11							
560	12 705 0560 17	814.85							
630	12 705 0630 17	1031.88							
710	12 705 0710 17	1308.13							

\*SDR 17

Standard length 5m

Please note that a transportation surcharge may be applied on pipe diameters 250mm or larger - please enquire for details.



### Polypropylene Material

AGRU Polypropylene pipes and fittings are manufactured in accordance with DIN 8077/8078 using the following materials:

Pipes: Nucleoid PP-H 100 (Beta  $\beta$ -PP)  
Fittings: PP-R (polypropylene random copolymer)

Nucleoid PP-H is chosen for pipes because of its exceptional impact strength at cold temperatures, good stress fracture and chemical resistance. PP-R (also optionally available as pipe) provides high long term creep strength at continuous high temperatures. Other types of Polypropylene are also available:

#### PP-H/PP-R industrial piping systems

Plastic pipes and fittings made of PP-H and PP-R have proved their value for decades in every area of industry. Above all, excellent temperature and corrosion resistance ensure durability. PP is characterised by its superior strength, stiffness, hardness, and the temperature and chemical resistance these features ensure. PP can be used between -5°C and +95°C.

#### Electrically conductive: HDPE-ESD-el / PPS / PPS-ESD-el

In plastic piping system building, electrically conductive piping must be used in areas with risk of explosion. Electrically conductive plastics modified by the addition of carbon black guarantee that the known benefits of polyolefins, such as chemical resistance and easy processing and installation, are retained. However, the conductive carbon black does reduce the impact strength and creep strength.

#### High Purity

PP Pure PP-R (High purity grade Polypropylene random copolymer)  
Selected and fully traceable raw materials are manufactured under strictly controlled conditions. This materials is ideal for less critical ultra-pure water applications (see High Purity Systems).

Polypure PP-R: Natural (Polypropylene random copolymer, natural coloured)

As natural PP-R contains no colour additives, it is ideally suited for high purity water piping systems. Note that it is not UV stabilised (see High Purity Systems).