

UNILON[®]

SYMBOL OF HIGH QUALITY PIPE & FITTINGS

HDPE

PIPES & FITTINGS



 P.T. HARAPAN WIDYATAMA PERTIWI
JAKARTA

UNILON HDPE PIPE RAW MATERIAL PROPERTIES

Materials	Properties	Testing Method	Unit	PE 80	PE 100
MECHANICAL	Density	ISO 1183	g/cm ³	0.945	0.955
	Melt Index MFI 190°	ISO 1133	g/10min	0.52	0.35
	Tensile Strength at Yield Point	ISO 527	Mpa	24	28
	Elongation at Yield Point	ISO 527	%	9	9
	Direct Tensile Strength Strain Rate	ISO 527	Mpa	34	35
	Elongation at Break	ISO 527	%	> 700	> 700
	Flexural stress at 3.5% deflection (2mm/min)	ISO 178	Mpa	17	23
	Shore Hardness D	ISO 868		65	65
THERMAL	Crystalline Melting Range	(DSC)	°C	128 - 131	130 - 132
	Thermal Conductivity at 20°C	DIN 52612	W/m°C	0.4	0.4
	Coefficient of linear thermal expansion up to 80°C		1/°C	1.6 x 10 ⁻⁴	1.6 x 10 ⁻⁴
ELECTRICAL	Dielectric Strength	IEC 243	KV/cm	180	180
	Dielectric (2 x 10 ⁶ cycles)	IEC 250		2.4	2.4
	Surface Resistance	IEC 93	OHMS	>10 ¹⁶	>10 ¹⁶

SNI 8884-2:2020 – HDPE PIPE FOR GAS

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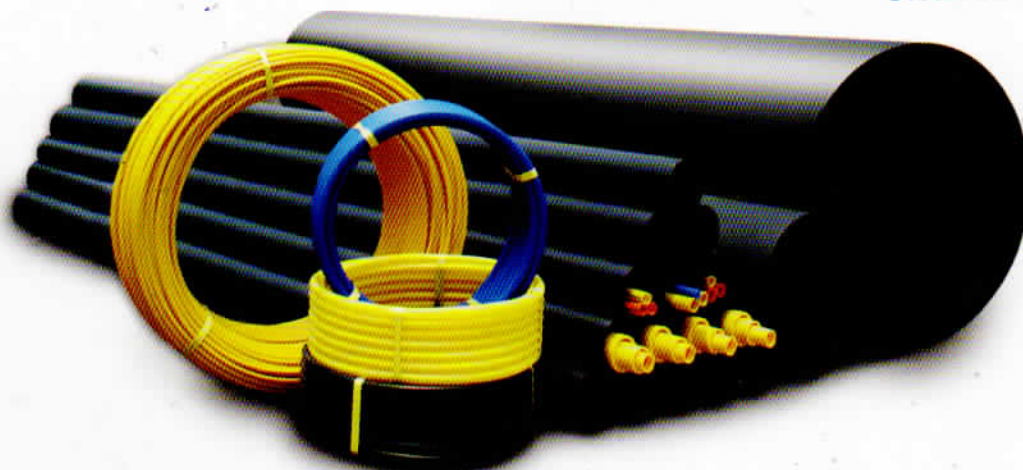
OD	SDR 9	SDR 11	SDR 13,6	SDR17	SDR 17,6	SDR 21	SDR 26
(mm)	Wall Thickness (mm)						
16	3.0	2.3	-	-	-	-	-
20	3.0	2.3	-	-	-	-	-
25	3.0	2.3	2.3	-	-	-	-
32	3.6	3.0	2.4	2.3	2.3	-	-
40	4.5	3.7	3.0	2.4	2.3	2.3	-
50	5.6	4.6	3.7	3.0	2.9	2.4	2.3
63	7.1	5.8	4.7	3.8	3.6	3.0	2.5
75	8.4	6.8	5.6	4.5	4.3	3.6	2.9
90	10.1	8.2	6.7	5.4	5.2	4.3	3.5
110	12.3	10.0	8.1	6.6	6.3	5.3	4.2
125	14.0	11.4	9.2	7.4	7.1	6.0	4.8
140	15.7	12.7	10.3	8.3	8.0	6.7	5.4
160	17.9	14.6	11.8	9.5	9.1	7.7	6.2
180	20.1	16.4	13.3	10.7	10.3	8.6	6.9
200	22.4	18.2	14.7	11.9	11.4	9.6	7.7
225	25.2	20.5	16.6	13.4	12.8	10.8	8.6
250	27.9	22.7	18.4	14.8	14.2	11.9	9.6
280	31.3	25.4	20.6	16.6	15.9	13.4	10.7
315	35.2	28.6	23.2	18.7	17.9	15.0	12.1
355	39.7	32.2	26.1	21.1	20.2	16.9	13.6
400	44.7	36.4	29.4	23.7	22.8	19.1	15.3
450	50.3	40.9	33.1	26.7	25.6	21.5	17.2
500	55.8	45.5	36.8	29.7	28.4	23.9	19.1
560	-	50.9	41.2	33.2	31.9	26.7	21.4
630	-	57.3	46.3	37.4	35.8	30.0	24.1

HDPE PIPES DIMENSIONS

SNI 4829.2 : 2015 – PE 80 & PE 100

Series SDR	S - 4 SDR - 9	S - 5 SDR - 11	S - 6.3 SDR - 13.6	S - 8 SDR - 17	S - 10 SDR - 21	S - 12.5 SDR - 26	S - 16 SDR - 33	S - 20 SDR - 41
PE 80	PN - 16	PN - 12.5	PN - 10	PN - 8	PN - 6	PN - 5	PN - 4	PN - 2.5
PE 100	PN - 20	PN - 16	PN - 12.5	PN - 10	PN - 8	PN - 6	PN - 5	PN - 4
OD (mm)	Wall Thickness (mm)							
16	2.0	-	-	-	-	-	-	-
20	2.3	2.0	-	-	-	-	-	-
25	3.0	2.3	2.0	-	-	-	-	-
32	3.6	3.0	2.4	2.0	-	-	-	-
40	4.5	3.7	3.0	2.4	2.0	-	-	-
50	5.6	4.6	3.7	3.0	2.4	2.0	-	-
63	7.1	5.8	4.7	3.8	3.0	2.5	-	-
75	8.4	6.8	5.6	4.5	3.6	2.9	-	-
90	10.1	8.2	6.7	5.4	4.3	3.5	-	-
110	12.3	10.0	8.1	6.6	5.3	4.2	-	-
125	14.0	11.4	9.2	7.4	6.0	4.8	-	-
140	15.7	12.7	10.3	8.3	6.7	5.4	-	-
160	17.9	14.6	11.8	9.5	7.7	6.2	-	-
180	20.1	16.4	13.3	10.7	8.6	6.9	-	-
200	22.4	18.2	14.7	11.9	9.6	7.7	-	-
225	25.2	20.5	16.6	13.4	10.8	8.6	-	-
250	27.9	22.7	18.4	14.8	11.9	9.6	-	-
280	31.3	25.4	20.6	16.6	13.4	10.7	-	-
315	35.2	28.6	23.2	18.7	15.0	12.1	9.7	7.7
355	39.7	32.2	26.1	21.1	16.9	13.6	10.9	8.7
400	44.7	36.3	29.4	23.7	19.1	15.3	12.3	9.8
450	50.3	40.9	33.1	26.7	21.5	17.2	13.8	11.0
500	55.8	45.4	36.8	29.7	23.9	19.1	15.3	12.3
560	62.5	50.8	41.2	33.2	26.7	21.4	17.2	13.7
630	70.3	57.2	46.3	37.4	30.0	24.1	19.3	15.4
710	79.3	64.5	52.2	42.1	33.9	27.2	21.8	17.4
800	89.3	72.6	58.8	47.7	38.1	30.6	24.5	19.6
900	-	81.7	66.2	53.3	42.9	34.4	27.6	22.0
1000	-	90.2	72.5	59.3	47.7	38.2	30.6	24.5
1200	-	-	88.2	67.9	57.2	45.9	36.7	29.4
1400	-	-	102.9	82.4	66.7	53.5	42.9	34.3
1600	-	-	117.6	94.1	76.2	61.2	49.0	39.2

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HDPE BUTT-WELD FITTINGS



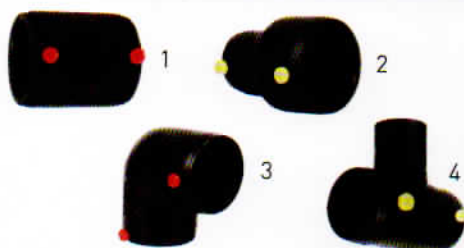
MOULDED

1. Elbow 90°
2. Stub End Flange
3. Reducer
4. Tee
5. Reducing Tee

SEGMENTED

6. Tee Segmented
7. Elbow Segmented

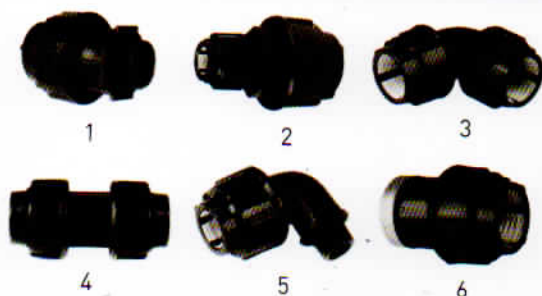
HDPE ELECTROFUSSION FITTINGS



1. Connection Socket
2. Reducer
3. Elbow 90°
4. Tee Connection

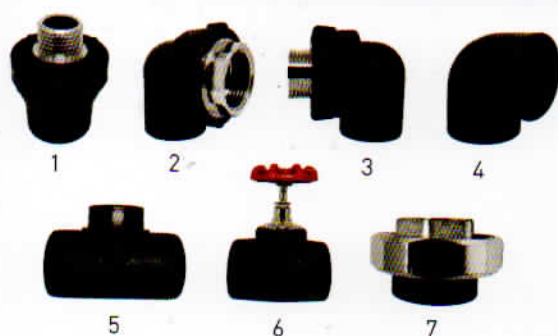
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HDPE COMPRESSION FITTINGS



1. Male Threaded Adaptor
2. Reducing Compression
3. Elbow 90° Compression
4. Straight Coupler Compression
5. Male Threaded Elbow 90°
6. Female Threaded Adaptor

HDPE SOCKET FUSION FITTINGS



1. Threaded Reducing Coupling
2. Female Threaded Adaptor
3. Male Threaded Adaptor
4. Elbow 90° Adaptor
5. Tee Adaptor
6. Gate Valve
7. Water Moer

CUSTOMER SERVICE



UNILON is internationally certified for Quality Management System for production and Sales of uPVC, HDPE Pipes and Fittings.

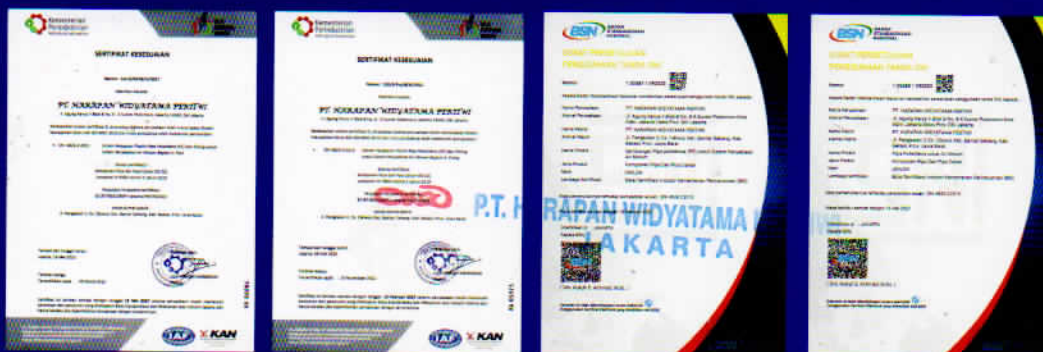
UNILON constantly strives to provide our customers with excellent and diverse range of services. Our sales and marketing teams consist of qualified, fully trained and experienced professionals.

To minimize our customers' inventory cost, we maintain an accurate and punctual product delivery service.

In some cases, we also offer specific pipe installation training or on-site installation services. Unlike the conventional uPVC pipe joining method, HDPE pipe requires special equipments for the installation. These equipments are available upon customer's request. For customers who wish to improve their capacity in this installation method, UNILON will provide a brief introduction and an on-hand practice with the tangible products and equipments.

UNILON also provides after sales services such as pre-sales testing and on-site inspection to monitor the quality of the pipe installation. We are committed to continue finding new ways to meet our customer needs.

CERTIFICATIONS



UNILON's HDPE products are Nationally-Certified (SNI) for drinking water utilities.