

➤ Specialists in the manufacture of
**high-density polyethylene
(HDPE) pipes**



Pipes for potable water networks 20 mm – 315 mm
Pipes for sewerage networks from 110mm SN4, SN8 and from 160mm to 1000mm

Proud to belong to:

> GlobalPlast Team!

Committed to delivering quality and service.



Who are we?



We are a Peruvian company founded in 2007

Committed to quality and service, with care for the environment and society, with our collaborators and shareholders.

We supply the local and international markets with the manufacturing and commercialization of HDPE pipes ranging from 16 mm up to 1000 mm and ½" to 36" for different applications, as well as accessories injected and segmented for different business sectors.

We serve the following sectors:



✓ Mining



✓ Agriculture



✓ Water & Sanitation



✓ Industry



✓ Telecommunications



✓ Special Requirements



Our new and modern plant located in the south of Lima operates 24 hours a day.

We hold ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 certifications, as well as other certifications. We began exporting in 2015. Today we are present in Ecuador, Panama, Bolivia, Colombia, Poland and Portugal.

In addition, our geomembrane laboratory is accredited by GAL-LAP, which guarantees the reliability of our tests and quality controls.

> Manufacturing and commercialization of HDPE pipes

We guarantee the best product and manufacturing time in the industry

What do we do?



High-Density Polyethylene (HDPE) pipes and accessories

We manufacture and commercialize HDPE pipes and accessories beyond established ISO, ASTM and other technical standards, which allows us to provide our clients with the best product in the industry, with the assurance that 100% virgin raw material is used and delivered on time.

Characteristics



Main Characteristics

- ✓ 50+ year service life
- ✓ Antiseismic
- ✓ Excellent thermal and chemical resistance, and impact resistance
- ✓ Solid, impermeable and lightweight
- ✓ Flexible and durable. High elongation capacity, even at low temperatures
- ✓ Not affected by acids, resistant to hot water (max. 60°C) and most common solvents



Main Uses

- ✓ Water, air and gas transport
- ✓ Sanitation
- ✓ Mining tailings transport
- ✓ Compressed air injection
- ✓ Industrial uses
- ✓ Irrigation, among others



Advantages

- ✓ Zero leaks
- ✓ Flexibility and elasticity
- ✓ UV protection (only for black pipes)
- ✓ Can be used in trenchless installations – suitable for extreme climates
- ✓ Lightweight
- ✓ Long service life
- ✓ Resistant to seismic movements
- ✓ Recyclable, among other advantages

> Quality Laboratory

We meticulously guarantee the delivery of your products.



Laboratory

High-technology and quality production!

Our state-of-the-art laboratory uses imported machinery certified for two types of resin: PE80 (PE3608) and PE100 (PE4710). All resins are approved by our rigorous quality department, ensuring excellence.



oben | Holding Group

We are proud to belong to Oben Holding Group, one of the largest HDPE pipe producers in Peru.

Pipe Applications:

- > Basic sanitation
- > Aqueducts, potable water distribution networks, wastewater collection networks
- > Hydrocarbons
- > Transport and distribution of underground gas networks, fuel distribution bases and derivatives
- > Fire protection networks
- > Sanitary landfills – pipes for biogas collection
- > Irrigation and industry
- > Alcohol and sugar production
- > Aqueducts, irrigation systems and water discharge pipelines
- > Mining
- > Conduction of corrosive liquids, wastewater, effluents, potable water transport, air, cabling and leachate conduction



DIMENSIONAL SPECIFICATIONS FOR PIPES ACCORDING TO ASTM D3035

SDR 32.5	SDR 26	SDR 21	SDR 17	SDR 15.5	SDR 13.5	SDR 11	SDR 9	SDR 7
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WORKING PRESSURE (PSI)	PE 3608
	PE 4710

50 PSI	65 PSI	80 PSI	100 PSI	110 PSI	130 PSI	160 PSI	200 PSI	265 PSI
65 PSI	80 PSI	100 PSI	125 PSI	140 PSI	160 PSI	200 PSI	250 PSI	335 PSI

NOMINAL OUTSIDE DIAMETER (INCHES)	AVERAGE OUTSIDE DIAMETER		MINIMUM WALL THICKNESS (mm)									
	INCHES	mm										
1/2	0.840	21.34	-	-	-	-	-	-	1.57	1.93	2.36	3.05
3/4	1.050	26.70	-	-	-	1.57	1.73	1.98	2.41	2.97	3.71	3.81
1	1.315	33.40	-	1.57	1.60	1.96	2.16	2.46	3.05	3.71	4.78	4.78
1 1/4	1.660	42.20	-	1.63	2.01	2.49	2.72	3.12	3.84	4.67	6.02	6.02
1 1/2	1.900	48.30	1.57	1.85	2.29	2.84	3.12	3.58	4.39	5.36	6.88	6.88
2	2.375	60.30	1.85	2.31	2.87	3.56	3.89	4.47	5.49	6.71	8.61	8.61
3	3.500	88.90	2.74	3.43	4.24	5.23	5.74	6.58	8.08	9.88	12.70	12.70

Note: Other diameters and SDR ratios not included in this table are also available. For further information, please contact your sales representative.

	DIMENSIONAL SPECIFICATIONS FOR PIPES ACCORDING TO SPEC API 15LE									
	SDR 32.5	SDR 26	SDR 21	SDR 17	SDR 13.5	SDR 11	SDR 9	SDR 7	SDR 7.3	SDR 5
WORKING PRESSURE (PSI)	65 PSI	80 PSI	100 PSI	125 PSI	160 PSI	200 PSI	250 PSI	335 PSI	315 PSI	500 PSI
PE 4710										

NOMINAL DIAMETER (INCHES)	AVERAGE OUTSIDE DIAMETER		MINIMUM WALL THICKNESS (mm)																	
	INCHES	mm																		
1/2	0.840	21.34	-	-	-	-	-	1.93	2.36	3.05	-	-	-	-	-	-	-	-	-	-
3/4	1.050	26.67	-	-	-	-	-	2.41	2.97	3.81	-	-	-	-	-	-	-	-	-	-
1	1.315	33.40	-	-	-	-	1.96	2.46	3.05	3.71	4.78	4.57	5.56	5.33						
1 1/4	1.660	42.16	-	-	2.01	2.49	3.12	3.84	4.67	6.02	5.77	7.03	8.43							
1 1/2	1.900	48.26	-	-	2.29	2.84	3.58	4.39	5.36	6.88	6.60	8.05	9.62							
2	2.375	60.33	-	-	2.87	3.56	4.47	5.49	6.71	8.61	8.25	10.03	12.07							
2 1/2	2.875	73.00	-	-	3.48	4.29	5.41	6.63	8.10	10.44	10.00	12.17	14.61							
3	3.500	88.90	-	-	4.24	5.23	6.58	8.08	9.88	12.70	12.17	14.81	17.78							
4	4.500	114.30	-	-	5.44	6.73	8.46	10.39	12.70	16.33	15.65	19.05	22.86							
5	5.563	141.30	-	-	6.73	8.31	10.46	12.85	15.70	20.19	19.35	23.55	28.26							
6	6.625	168.28	5.18	6.48	8.00	9.91	12.47	15.29	18.69	24.03	23.06	28.04	33.66							
8	8.625	219.08	6.73	8.43	10.44	12.88	16.23	19.91	24.33	31.29	30.02	36.53	43.82							
10	10.750	273.05	8.41	10.49	13.00	16.05	20.22	24.82	30.33	39.01	37.10	45.51	54.61							
12	12.750	323.85	9.96	12.45	15.42	19.05	23.98	29.44	35.99	46.25	44.37	53.98	64.77							
14	14.000	355.60	10.95	13.67	16.94	20.93	26.34	32.33	39.52	50.80	-	59.18	71.12							
16	16.000	406.40	12.50	15.62	19.35	23.90	30.10	36.96	45.16	58.06	-	67.74	81.28							
18	18.000	457.20	14.07	17.58	21.77	26.90	33.86	41.55	50.80	65.30	-	76.20	91.50							
20	20.000	508.00	15.62	19.53	24.18	29.87	37.62	46.18	56.44	72.57	-	-	-							
22	22.000	558.80	17.20	21.49	26.62	32.87	41.40	50.80	62.08	79.83	-	-	-							
24	24.000	609.60	18.75	23.44	29.03	35.86	45.16	55.42	67.74	87.10	-	-	-							
26	26.000	660.40	20.32	-	31.45	38.84	48.92	60.05	73.38	-	-	-	-							
28	28.000	711.20	21.89	-	33.86	41.83	52.68	64.64	79.02	-	-	-	-							
30	30.000	762.00	23.44	-	36.30	44.83	56.44	69.27	84.66	-	-	-	-							
32	32.000	812.80	25.02	-	38.71	47.80	60.20	73.89	-	-	-	-	-							
34	34.000	863.60	26.57	-	41.12	50.80	63.98	78.51	-	-	-	-	-							
36	36.000	914.40	28.14	-	43.54	53.80	67.74	83.13	-	-	-	-	-							

Note: Other diameters and SDR ratios not included in this table are also available. For further information, please contact your sales representative.



DIMENSIONAL SPECIFICATIONS FOR PIPES ACCORDING TO NTP ISO 4427-2

WORKING PRESSURE (PSI)	PE 80
	PE 100

NOMINAL OUTSIDE DIAMETER (mm)	
16	
20	
25	
32	
40	
50	
63	
75	
90	
110	
125	
140	
160	
180	
200	
225	
250	
280	
315	
355	
400	
450	
500	
560	
630	
710	
800	
900	
1000	

PN 3.2 BAR (45 PSI)	PN 4 BAR (58 PSI)	PN 5 BAR (72 PSI)	PN 6 BAR (87 PSI)	PN 8 BAR (116 PSI)	PN 10 BAR (145 PSI)	PN 12.5 BAR (181 PSI)	PN 16 BAR (232 PSI)	PN 20 BAR (290 PSI)	PN 25 BAR (363 PSI)
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MINIMUM WALL THICKNESS (mm)									
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	2.00	2.00	2.30	3.00
-	-	-	-	-	-	2.30	2.30	3.00	4.20
-	-	-	-	-	2.00	2.40	3.00	3.60	4.40
-	-	-	-	2.00	2.40	3.00	3.70	4.50	5.50
-	-	-	2.00	2.40	3.00	3.70	4.60	5.60	6.70
-	-	2.00	2.40	3.00	3.80	4.70	5.80	7.10	8.30
-	-	2.50	3.00	3.60	4.50	5.60	6.80	8.40	10.50
-	-	2.90	3.60	4.30	5.40	6.70	8.20	10.10	12.50
-	-	3.50	4.30	5.30	6.60	8.10	10.00	12.30	15.00
-	-	4.20	5.30	6.00	7.40	9.20	11.40	14.00	18.30
-	-	4.80	6.00	7.40	8.30	10.30	12.70	15.70	20.80
-	-	5.40	6.70	8.30	9.50	11.80	14.60	17.90	23.30
-	-	6.20	7.70	9.50	10.70	13.30	16.40	21.90	26.60
-	-	6.90	8.60	10.70	11.90	14.70	18.20	24.60	29.90
-	-	7.70	9.60	11.90	13.40	16.60	20.50	27.40	33.20
-	-	8.60	10.80	13.40	14.80	18.40	22.70	30.80	37.40
-	-	9.60	11.90	14.80	16.60	20.60	25.40	31.30	41.50
-	-	10.70	13.40	16.60	18.70	23.20	28.60	38.30	46.50
7.70	9.70	12.10	15.00	18.70	21.10	26.10	32.20	39.70	52.30
8.70	10.90	13.60	16.90	21.10	23.70	29.40	36.30	48.50	59.00
9.80	12.30	15.30	19.10	23.70	26.70	33.10	40.90	54.70	-
11.00	13.80	17.20	21.50	26.70	29.70	36.80	45.40	61.50	-
12.30	15.30	19.10	23.90	29.70	33.20	41.20	50.80	65.80	-
13.70	17.20	21.40	26.70	33.20	37.40	46.30	57.20	70.30	-
15.40	19.30	24.10	30.00	37.40	42.10	52.20	64.50	79.30	-
17.40	21.80	27.20	33.90	42.10	47.40	58.80	72.60	89.30	-
19.60	24.50	30.60	38.10	47.40	53.30	66.20	81.70	-	-
22.00	27.60	34.40	42.90	53.30	59.30	72.50	90.20	-	-
24.50	30.60	38.20	47.70	59.30	-	-	-	-	-

Note: Other diameters and SDR ratios not included in this table are also available. For further information, please contact your sales representative.

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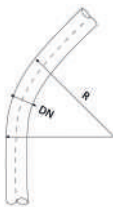
Details of the Main Pipe Characteristics

1. BENDING RADIUS

Permissible bending radius.

SDR	20°C	0°C
41	52xDN	130xDN
33	42xDN	105xDN
26	34xDN	85xDN
21	27xDN	68xDN
17	27xDN	68xDN
13.6	25xDN	63xDN
11	25xDN	63 xDN
9	20xDN	50xDN

Between 0°C and 20°C, the bending radius may be determined by linear interpolation.



2. INTERNAL DIAMETER

For engineering calculations, it is recommended to consider the average internal diameter, calculated using the following equation:

$$DI_m = DO_m - 2 X e_m$$

Where:

DI_m : Average internal diameter

DO_m : Average external diameter, calculated as the average of the maximum and minimum diameter tolerance

e_m : Average thickness, calculated as the average of the minimum and maximum thickness

If a larger internal diameter is required for inserted devices or reinforcements, the actual pipe dimensions must be considered.

3. HYDRAULIC PRESSURE LOSS IN PIPES

Approach based on the Hazen-Williams equation, valid for pressurized water transport:

$$P_m = 6.05 X \left(\frac{Q^{1.85}}{C^{1.85} X DI^{4.87}} \right) = 10^5$$

Where:

P_m : Hydraulic resistance (bar/m of pipe)

C : Hazen-Williams flow factor (150 for thermoplastic pipe)

Q : Volumetric flow rate (L/min)

DI : Internal diameter of the pipe (mm)

4. CRITICAL BUCKLING

The following equation approximates the allowable buckling pressure (pipe without restrictions) according to the SDR of the HDPE pipe:

$$P_{wu} = \frac{f_o}{N_s} X \frac{2 X E}{(1 - \mu^2)} X \left(\frac{1}{SDR - 1} \right)^3$$

Where:

P_{wu} : Allowable buckling pressure without restrictions, psi

SDR : Standard Dimension Ratio

E : Apparent elastic modulus of the pipe material, psi

f_o : Ovality correction factor

N_s : Safety factor, normally 2.5

μ : Poisson's coefficient, 0.45 for HDPE pipes



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Tuberías y Geomembranas

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