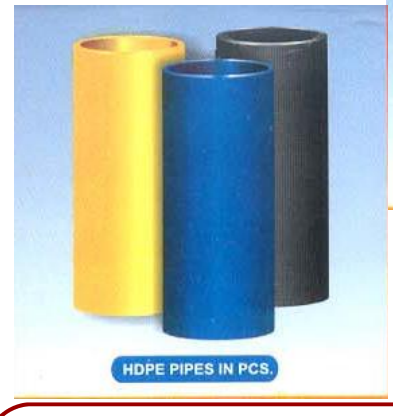
Philippine Standard Quality Certification Mark

CERTIFIED Product Quality

HYDROPHIL HDPE PLAIN PIPES



SPECIFICATIONS

STANDARD	Conforming to ISO 4427;2009. SDR PR based on controlled outside diameter
SIZES	20mmØ to 500mmØ Cutting lengths: 300m (for 20mmØ) 150m (for 25mmØ) 60m (for 40mmØ – 75mmØ) 50m (for 90mmØ and 110mmØ) 6m (for 160mmØ and above)
COLORS	Blue, Black, Black w/ Blue, Black w/ Orange
MATERIAL	HDPE Plastic Extrusion Compound PE 80 and PE 100
JOINT METHODS	Butt fusion, electro-fusion, compression fittings, mechanical jointing

Nominal Outside Diameter (mm)	Pipe Series				
	S 10	S 8	S 6.3	S 5	S 4
	Standard Dimension Ratio				
	SDR 21	SDR 17	SDR 13.6	SDR 11	SDR 9
	Nominal Pressure PN for $¢_S$ = 8MPa				
PE 80	PN 6	PN 8	PN 10	PN 12.5	PN 16
PE 100	PN 8	PN 10	PN 12.5	PN 16	PN 20
	Nominal Wall Thickness (mm)				
20	-	1.20	1.47	1.82	2.30
25	-	1.50	2.00	2.30	3.00
32	-	2.00	2.40	3.00	3.60
40	-	2.40	3.00	3.70	4.50
50	2.40	3.00	3.70	4.60	5.60
63	3.00	3.80	4.70	5.80	7.10
75	3.60	4.50	5.60	6.80	8.40
90	4.30	5.40	6.70	8.20	10.10
110	5.30	6.60	8.10	10.00	12.30
160	7.70	9.50	11.80	14.60	17.90
225	10.80	13.40	16.60	20.50	25.20
280	13.40	16.60	20.60	25.40	31.30
315	15.00	18.70	23.20	28.60	35.20
355	16.90	21.10	26.10	32.20	39.70
400	19.10	23.70	29.40	36.30	44.70
450	21.50	26.70	33.10	40.90	50.30
500	23.90	29.70	36.80	45.40	55.80

HDPE PIPES - A Case History

Japan Water Works Association - Damage to Water Work Pipes During the Great Hanshin Awaji Earthquake and Their Evaluation, 1996 Feb.

HDPE Pipes - Strong against earthquakes and being recognized as excellent materials by the Japan Water Works Association. Kobe City, the central area severely hit by the disaster, had leaks from water distribution pipes at approximately 1,600 locations caused by joints coming out (63%), broken pipes (20%), and other damages to the fixture (17%). Leaks from water supply pipes reached approximately 90,000 and most of them were broken pipes. According to the report, there was no water leak problem with the HDPE pipe. The rate of damage caused to each type of pipe in three victim cities (Kobe, Nishinomiya, Ashiya) is shown in Table 1. The situation of gas pipes which has longer distribution length is shown in Table 2. Comparative analysis shows there was also no damage to HDPE pipes.

Table 1
Comparative Rate of Damage of Each Type of Pipe
(for cities of Kobe, Nishinomiya and Ashiya)

Type of Pipe	*Rate of Damage*
DCIP	0.488
CIP	1.508
PVC Pipes	1.430
Steel Pipes	0.437
AC Pipes	1.782
PE Pipes	**0.000**

Table 2
Damage Conditions of Gas Distribution Pipes
(Number of damaged portions of each type of low pressure gas distribution pipes)

Pipe	Steel Pipe	DCIP	PE
Total length (km)	21.338	12.204	1.458
No. of damages	25.8	0.630	0
Rate of Damage (Place/ km)	1.210	0.052	0.000

Source: Resources and Energy Office, Gas Countermeasure Committee - Gas Earthquake Countermeasure Study Group Report, 1996.

APPLICATIONS

- Water system
- Transmission mainlines
- Distribution mainlines
- Service connections
- In-house plumbing
- Irrigation for plantations
- Sprinkler systems
- Industrial processes
- Industrial waste and drain lines
- Sludge lines
- Industrial fluid piping
- Chemical process piping
- Mining process piping
- Sanitation
- Drainage pipes
- Sewer pipes
- Waste water treatments
- Downspouts
- Gas piping

ADVANTAGES

- **High flexibility**
- **High impact resistance**
- **Lightweight**
- **Cost effective**
- **Corrosion resistant**
- **Chemical resistant**
- **Excellent flow characteristics**