HDPE PIPE SPECIFICATION

HDPE PIPING SYSTEMS

PRODUCT OVERVIEW

Material: PE100

SDR21/PN8, SDR26/PN6, SDR33/PN5
Size: dn20-1200mm
Standard: ISO4427-2, EN12201-2, AS/NZS 4130, BS 6920, GB/T 13663
Color: black color with blue strips or blue color for water
Form supplied:
* Pipe diameter dn20-dn63mm in 50-200m coil length
* Pipe diameter dn20-dn1200mm in 5.8 or 11.8 meters straight length
* Other forms are also available upon request

ADVANTAGES

* Non-toxic: no heavy metal additives, would not be covered with dirt or contaminated by bacterium, sanitary, no secondary pollution
* Corrosion resistance: unaffected by chemical matters and electron chemical matters which cause corrosion in metals.
* High flow capacity: smooth interior walls and low abrasion resistance result low flow resistance and high flow capacity.
* Excellent Flexibility: can be supplied in coil form, fewer fittings required and lower cost in installation.
* High impact and breakage resistance.
* Excellence UV resistance: black color HDPE pipe includes 2-2.5% black carbon content, allow the pipe can be exposed outdoor.
* Easy installation: light weight, easy to transport and handle friendly.
* Long service life: can work for more than 50 years under proper use.
* Various joint availability: thermal butt fusion, electro fusion or mechanical joint

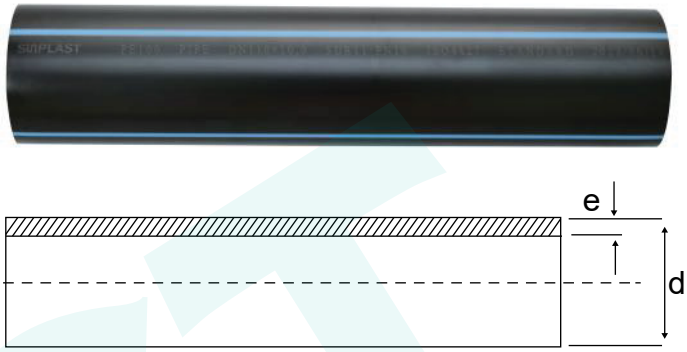
MAIN APPLICATIONS

* Municipal water supply & sewage treatment
* Commercial & residential water supply
* Industrial Liquids transportation.
* Outdoor gas distribution
* Dredge works & mining works

PHYSICAL PROPERTIES

Item		Technical Index
Density (g/cm³)		0.941~ 0.965
Black Carbon Content		2 ~ 2.5%
Vica Softening Point (℃)		≥126
Melt Flow Rate, 190℃, 5kg (g/10min)		0.2 ~ 1.4
Longitudinal Shrinking Rate		≤3%
Elastic Modulus (Mpa)		600 ~ 900
Coefficient Of Linear Expansion (mm/m℃)		0.16 ~ 0.20
Oxidation Induced Time , 200℃ (min)		≥20
Extension Rate Break		≥350%
Hydraulic test for PE100 pipe	20℃,100h, Circumferential Stress 12.4Mpa	No leakage/no rupture
	80℃,165h, Circumferential Stress 5.5Mpa	No leakage/no rupture
	80℃,1000h, Circumferential Stress 5.0Mpa	No leakage/no rupture
Hydraulic test for PE80 pipe	20℃,100h, Circumferential Stress 9.0Mpa	No leakage/no rupture
	80℃,165h, Circumferential Stress 4.6Mpa	No leakage/no rupture
	80℃,1000h, Circumferential Stress 4.0Mpa	No leakage/no rupture

<Note>: Black Carbon Content is only applicable to HDPE pipes with black color.



SDR Rating / Material Grade	SDR33	SDR26	SDR21	SDR17	SDR13.6	SDR11	SDR9
	Normal Pressure Rating (bars)						
PE80 material	4	5	6	8	10	12.5	16
PE100 material	5	6	8	10	12.5	16	20
Normal Diameter dn (mm)				Wall Thickness e (mm)			
20						2.0	2.3
25					2.0	2.3	3.0
32				2.0	2.4	3.0	3.6
40			2.0	2.4	3.0	3.7	4.5
50		2.0	2.4	3.0	3.7	4.6	5.6
63		2.5	3.0	3.8	4.7	5.8	7.1
75		2.9	3.6	4.5	5.6	6.8	8.4
90		3.5	4.3	5.4	6.7	8.2	10.1
110		4.2	5.3	6.6	8.1	10.0	12.3
125		4.8	6.0	7.4	9.2	11.4	14.0
140		5.4	6.7	8.3	10.3	12.7	15.7
160		6.2	7.7	9.5	11.8	14.6	17.9
180		6.9	8.6	10.7	13.3	16.4	20.1
200		7.7	9.6	11.9	14.7	18.2	22.4
225		8.6	10.8	13.4	16.6	20.5	25.2
250		9.6	11.9	14.8	18.4	22.7	27.9
280		10.7	13.4	16.6	20.6	25.4	31.3
315	9.7	12.1	15.0	18.7	23.2	28.6	35.2
355	10.9	13.6	16.9	21.1	26.1	32.2	39.7
400	12.3	15.3	19.1	23.7	29.4	36.3	44.7
450	13.8	17.2	21.5	26.7	33.1	40.9	50.3
500	15.3	19.1	23.9	29.7	36.8	45.4	55.8
560	17.2	21.4	26.7	33.2	41.2	50.8	62.5
630	19.3	24.1	30.0	37.4	46.3	57.2	70.3
710	21.8	27.2	33.9	42.1	52.2	64.5	79.3
800	24.5	30.6	38.1	47.4	58.8	72.6	89.3
900	27.6	34.4	42.9	53.3	66.2	81.7	
1000	30.6	38.2	47.7	59.3	72.5	90.2	
1200	36.7	45.9	57.2	67.9			