

POLYETHYLENE PIPES FOR WATER DISTRIBUTION

Polyethylene pipes for water are manufactured from imported material PE 100, which are produced by renowned producers.

Quality

HIP-Petroplast water pipes meet all the provisions of EN 12201-2 standard. Pipes quality is controlled according to mentioned standard. Modernly equipped laboratories in the HIP-Petrohemija and Petrplast factories offer guarantee for the products' high quality.

Colour and Markings

Pipe colour:

Black with blue lines

Ends are clearly cut at right angles, and they are covered with blue caps

Water pipes are visivly marked at intervals of one meter with nonerasable mark.

Dimensions

Pipes are designed for work pressures of up to 6 bar, class SDR 26; up to 10 bar, class SDR-17; up to 12.5 bar, class .

Basic information on pipes are listed in the table below:

No.	Nominal outside diameters d (mm)	Allowable tolerances Δd (mm)	Nominal wall thickness and tolerances (mm)								Allowable ovality
			Pipe series (SDR) and nominal pressure (PN)								
			SDR 26 PN 6		SDR 17 PN 10		SDR 13.6 PN 12,5		SDR 11 PN 16		Flet pipes (mm)
e	Δe	e	Δe	e	Δe	e	Δe				
1	20	+0,3							2	+0,3	1.20
2	25	+0,3					2.0	+0,3	2.3	+0,4	1.20
3	32	+0,3			2	+0,3	2.4	+0,4	3.0	+0,4	1.30
4	40	+0,4			2.4	+0,4	3.0	+0,5	3.7	+0,5	1.40
5	50	+0,4	2.0	+0,3	3.0	+0,4	3.7	+0,5	4.6	+0,6	1.40
6	63	+0,4	2.5	+0,4	3.8	+0,5	4.7	+0,6	5.8	+0,7	1.50
7	75	+0,5	2.9	+0,4	4.5	+0,6	5.6	+0,7	6.8	+0,8	1.60
8	90	+0,6	3.5	+0,5	5.4	+0,7	6.7	+0,8	8.2	+1,0	1.80
9	110	+0,7	4.2	+0,6	6.6	+0,8	8.1	+1,0	10.0	+1,2	2.20
10	125	+0,8	4.8	+0,6	7.4	+0,9	9.2	+1,1	11.4	+1,3	2.50
11	140	+0,8	5.4	+0,7	8.3	+1,0	10.3	+1,2	12.7	+1,4	2.80
12	160	+1,0	6.2	+0,8	9.5	+1,1	11.8	+1,3	14.6	+1,6	3.20
13	180	+1,1	6.9	+0,8	10.7	+1,2	13.3	+1,5	16.4	+1,8	3.60
14	200	+1,2	7.7	+0,9	11.9	+1,3	14.7	+1,6	18.2	+2,0	4.00
15	225	+1,4	8.6	+1,0	13.4	+1,5	16.6	+1,8	20.5	+2,2	4.50
16	250	+1,5	9.6	+1,1	14.8	+1,6	18.4	+2,0	22.7	+2,4	5.0

Possible pipes producing by special customer order

Packaging and Storage

Pipes are produced either flat and cut into 6 or 12 meters length, or wound into coils of 100m, 200m or other length upon customer's demand

Pipes are stored in a way to be protected against mechanical damages.

Handling Polyethylene Pipes

Transportation

Transportation means for polyethylene pipes should be selected based on criteria that straight pipes and those in coils do not get damaged or deformed during transportation. It is necessary that pipes be laid in their entire length during transportation. A special attention should be paid whilst loading and unloading, so as not to scratch the pipes against the vehicle surfaces. Fittings are individually packed in transparent packages, for protection purposes. For easier transportation and handling during storage, several units are packed together in a cardboard box.

Pipes Laying

Polyethylene pipes can be laid under ground, above ground and under water. For underground laying the depth of the channel is within the range of 0.8 up to 1m, depending on the terrain configuration. In case of intersection of the pipeline with a line of communication, the depth is adjusted accordingly. If a protective pipe is used, the laying depth can go up to two meters. In case of channel laying, the coil should be unwound at least 24 hours in advance. In case of outside temperatures around 0°C, heating with hot air is highly recommended. Also, for laying purposes, the coefficient of linear thermal expansion should be taken into consideration which in case of polyethylene is $2 \times 10^{-5} \text{ } ^\circ\text{C}^{-1}$ or 0.2 mm per each meter of pipe length, at 1°C change in temperature. When the route direction is changed, the minimum allowed bending diameters for different temperatures should be taken into consideration:

$$R_{\min.} = 50d \text{ at } 0^\circ\text{C} \quad R_{\min.} = 35d \text{ at } 10^\circ\text{C} \quad R_{\min.} = 20d \text{ at } 20^\circ\text{C}$$

Jointing of Polyethylene Pipes

Polyethylene pipes are jointed using separable connection (metal couplers, PE and PP couplers, flanges) or inseparable (fixed) connection – by welding. It is strongly recommended that activities of pipe laying be entrusted to experts specialized in these jobs.

Pipe Welding and Assembly Team

Petroplast Plant is in possession of up-to-date computerized equipment for butt welding of pipes and fabricated fittings. Specially trained teams and a high-quality equipment represent a guarantee for safe assembly.

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