

## CORRUGATED ELECTROINSULATING PIPES

Corrugated electroinsulating pipes of polyethylene (PE) are used for cable and conductor protection offering both electrical and mechanical protection. High elasticity makes these pipes very attractive for construction works, motor vehicle installations, household appliances, industrial devices and machines, etc. High corrosion and chemical resistance, high temperature range applicability and excellent electrical resistance make these pipes suitable for a great number of applications.

According to the pressure resistance the pipes are classified as:  
heavy pipes – type T  
light pipes – type L

### Technical Characteristics of Corrugated Pipes

Corrugated PE and PP pipes are used for installations which do not require self-extinguishing and for the temperature ranges of  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$ . They are produced in colours requested by customers.

The dimensions of the corrugated pipes are given in the table below:

OUTSIDE DIAMETER	INSIDE DIAMETER (mm)		PIPES MASS (g/m)	
	(mm)	Typ L	Typ T	Typ L
16	11	10,5	27	38
20	14	13	45	68
25	18	17	64	89
32	24	23	93	130
40	31	30	116	162
50	40	39	146	204
63	51	50	183	256



PETROHEMIJA

# PE PIPES AND FITTINGS

## ***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.

### ***Warehousing***

PETROPLAST pipes can be stored in the open air for up to one year. For storage periods longer than a year, protection against UV radiation should be provided. Straight pipes should be stored horizontally on a flat surface without any sharp objects underneath and up to one meter in height.

Coiled pipes should be stored vertically or stacked one upon the other, taking care not to deform the pipes.

The pipes should be closed on their ends in order to prevent contamination of the inside.

The pipes must not be stored near heated surfaces. Care should be taken not to get the pipes in contact with fuels, solvents and similar matters.

### ***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  $2 \times 10^{-4} \text{ } ^\circ\text{C}^{-1}$  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:

Rmin. = 50 d at 0°C

Rmin. = 35 d at 10°C

Rmin. = 20 d at 20°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.

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