



Pipe Performance

Flexibility

Flexibility is an advantage offered by a number of plastics materials in comparison with metals, however Polybutene-1 is clearly the plastic of choice as illustrated in the following table, where typical flexural elasticity values of various polyolefin pipe materials are presented.

Cross-linking method	Cross-linked polyethylenes			PE-RT	PB-1
	PE-Xa Engel Process	PE-Xb Silane Process	PE-Xc Irradiation	-	-
Flexural Elasticity Modulus (MPa) Method ISO 178	389	574	333	690	247

(PE-RT - Raised Temperature Resistance polyethylene - an ethylene-octene copolymer)

Obviously, the easier it is to manipulate the pipe, the lower the installation time should be. In this respect, the ease of cabling through drilled holes and threading through confined spaces, combined with long pipe runs and a consequent reduction in the number of fittings required, are all factors which contribute to the speed of installation and associated reduction in labour costs.

Although Polybutene-1 pipe is easily flexed, care should be taken not to bend the pipe to the point of 'kinking'. In this respect, a maximum bending radius of 8 times the pipe diameter is recommended.

The following figure illustrates the recommended minimum bending radii for various Polybutene-1 pipe diameters

