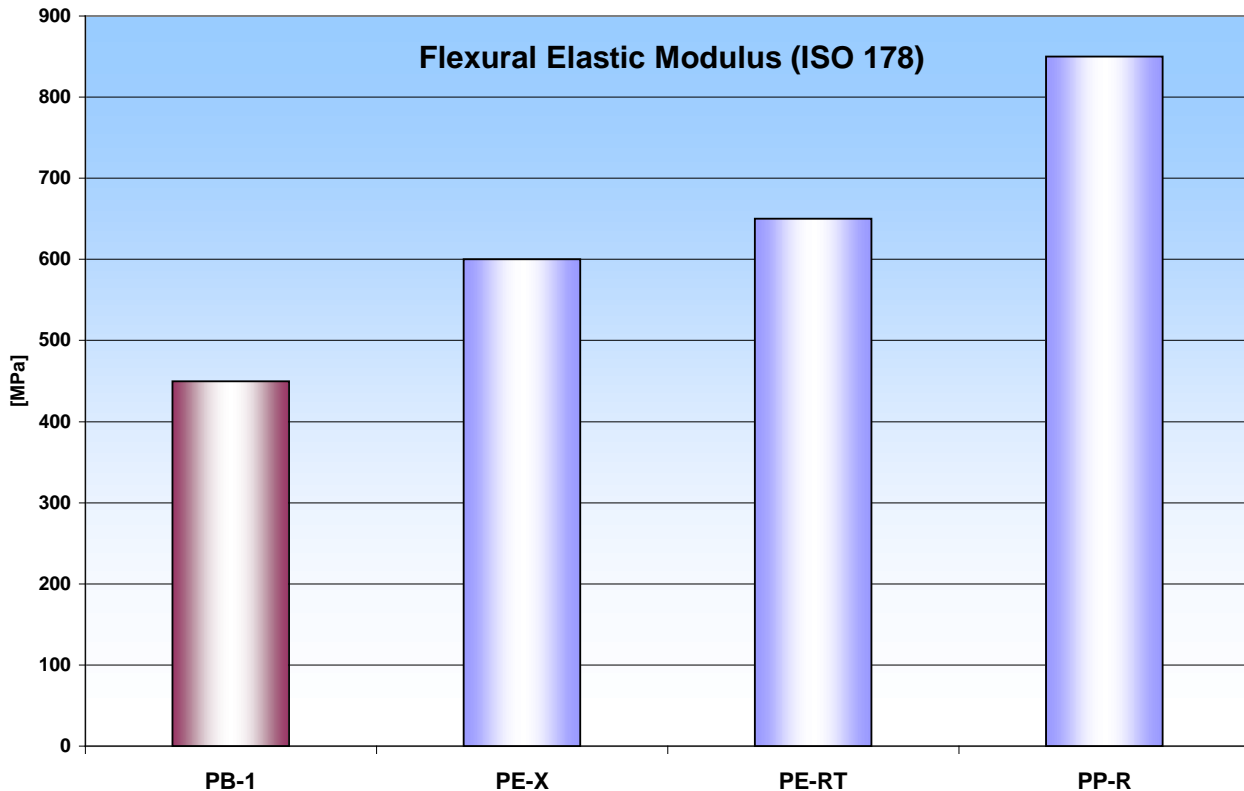


Flexural Elastic Modulus

1) Basic Information

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

2) Grafic overview



3) Results

The advantages of flexibility during the installation and service of Polybutene-1 piping systems are well clear from this table. 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.

4) References/Standards

Polybutene-1 is used successfully for underground pipelines in areas with high ground movements e.g. in Thailand.

The high flexibility remains also at lower temperatures – PB-1 pipes can be bended by hand until temperatures as low as -10°C. This is very useful for installations during winter time, as carried out in numerous applications e.g. in the Austrian, French and Swiss Alps.

Technical data are subject to alteration.

