

Why polyethylene?

1. Versatility

Polyethylene (PE) is available in several forms such as low-density (PE-LD), medium-density (PE-MD), high-density (PE-HD), cross-linked (PE-X), linear low-density (PE-LLD), PE with low flammability, and materials with controlled transparency. Special types are certified as safe to use for drinking water and food. Our experts can help make exact choices for you and your particular application.

2. Price/performance ratio

Polyethylene is very competitive with other materials. It offers the same durability, resistance to corrosion, service characteristics and installation properties as metals at a distinctly lower price. In particular, double-walled (co-extruded) pipes with a thick outer layer of PE-LD material and a thin inner coating from virgin PE-LLD offer excellent quality at a very reasonable cost.

3. Lightness

The density of all polyethylene varieties is less than one gram per cubic centimeter. In other words, polyethylene can float on water. Typical low-density polyethylene has a density of 0.93 g/cm³ (930 kg/m³) and high-density polyethylene has some 0.96 g/cm³ (960 kg/m³). From a practical point of view, it means substantial savings in transport costs in comparison to steel or copper. Imagine where before a crane would be necessary to install a large diameter steel pipe; a plastic pipe of the same size and rating can be lifted by two strong workers.

4. Easy welding and joining

Currently several techniques have been developed to weld continuous polyethylene piping safely and dependably. It must be stressed, however, that the different types are mutually incompatible for welding. For example, dependable joining of PE-HD and PE-LD piping is possible only by mechanical fittings. Once again, we strongly recommend that you refer to our experts when selecting pipes and fittings.

5. Inert surface

The surface of polyethylene pipes is smooth and inert. This results in enhanced hydraulic efficiency and suppression of turbulence as compared to metal piping. Therefore an old corroded steel piping can be replaced (or rehabilitate by sliplining) using polyethylene pipes of lower diameter while keeping the same hydraulic efficiency. Moreover, as compared to steel, there can be no internal blockage from corrosion or sediment formation. 6. Ecology Polyethylene is perfectly recyclable. While reprocessing of single types are entirely possible, blends of different polyethylene types need special treatment. At LUNA PLAST a.s. a special technology has been developed to produce good quality pipes from mixed polymers. Co-extruded pipes with a thick outer layer of recycled material and a thin inner coating offer excellent quality at a very reasonable cost. These products are our contribution to the general ecology and economy of any particular consumer.

If it's summarized, benefits of polyethylene are:

- Excellent Chemical Resistivity
- Superior Corrosion Resistance
- Seamless Construction (one-piece)
- Maintenance Free
- UV Stabilized
- Lightweight
- Leak Proof
- Impact Resistant
- Custom Fittings and Accessories