



### The pipe system

isoplus's preinsulated pipe systems are fixed pipe systems. The pipes consist of a steel carrier pipe and an HDPE casing pipe, which are cast into a fixed sandwich structure with polyurethane insulation.

### Steel pipe

Standard quality, longitudinal weld or spiral weld, P235TR1, P235TR2 or P235GH. Technical terms of delivery as per EN253.

Weld factor  $V = 1.0$

Test certificate as per EN 10 204 - 3.1.

Bevelled ends as per DIN 2559 T1/22 and ISO 6761.

### Insulation

The insulation is polyurethane foam with cyclopentane blowing agent, for optimum insulation values.

Compressive strength: 0.3 N/mm<sup>2</sup>

Continuous operating temperature, single pipe 143°C  
Continuous operating temperature, double pipe 130°C

By special order, isoplus can supply preinsulated pipes that can withstand a continuous operating temperature of 161°C.

### Casing pipe

The casing pipe is made of non-cross-linked hard polyethylene that is resistant to impact and fracture.

Material: Bimodal - HDPE

Density: over 940 kg/m<sup>3</sup>

Melt flow index: 0.3-0.8g/10 min.  
as per ISO 1133

Elongation at fracture: min. 350%

Internal corona treatment: to optimise bonding characteristics. (Traditionally produced pipes)

### Finished pipe

The finished pipe at least meets the requirements in DS/EN 253. The axial shear strength of the finished pipe, between the steel pipe, PUR and casing pipe, is at least 0.12 N/mm<sup>2</sup>.

Exposed end of steel pipe: 220 mm

Standard lengths: 6, 12 and 16 m

Corrosion protection is applied to exposed ends on delivery.

### Alarm system

isoplus pipes and components can be supplied with two integrated copper wires (1.5 mm<sup>2</sup>) for electronic monitoring.

### Fittings

All fittings are produced in accordance with the requirements in DS/EN 448 and DS/EN 488

**Diffusion barrier**

Isoplus can produce pipes with jacket pipes in jacket pipe dimensions of  $\leq \text{ø}355$  mm as energy-saving, continuously produced pipes with a diffusion barrier inserted between the jacket pipe and the polyurethane foam.

For pipes with jacket pipes in dimension of  $>\text{ø}355$  mm, the jacket pipe functions as a diffusion barrier due to its thickness.

The diffusion barrier secures isoplus pre-insulated pipes against ageing, and the heat loss is therefore constant throughout the pipe's technical service life.

Series 1 pipes are normally supplied as traditionally produced pipes without an inserted diffusion barrier. However, dimensions with jacket pipes  $\leq \text{ø}355$  mm can be supplied as continuously produced on a special delivery