PERT Barrier Pipe - Data Sheet

Description

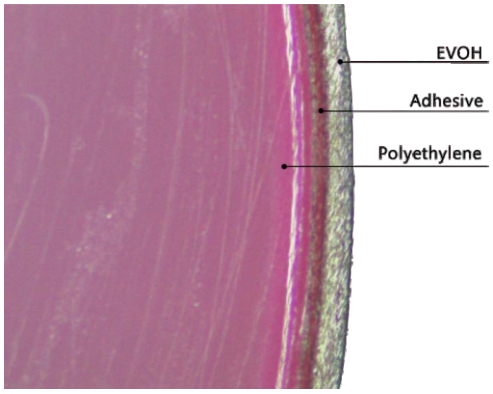
PE-RT barrier pipe is produced from the material LG SP980 under an ISO 9001 quality system.
PE-RT is extremely flexible with excellent long-term stress resistant properties combined with long-term strength at elevated temperatures.

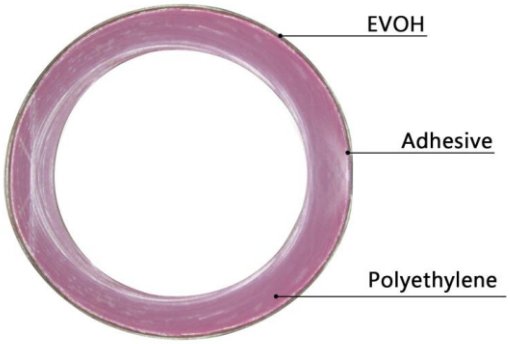
Pipe Description

Pipe description	Outer diameter	Wall thickness
10mm x 1.3mm PE-RT barrier pipe	10.0-10.3	1.3-1.5
12mm x 1.6mm PE-RT barrier pipe	12.0-12.3	1.6-1.8
16mm x 2.0mm PE-RT barrier pipe	16.0-16.3	2.0 -2.3
20mm x 2.0mm PE-RT barrier pipe	20.0-20.3	2.0-2.3

Field of application

PE-RT is suitable for underfloor heating systems, hot and cold water sanitary and distribution systems and various heating systems for domestic, commercial & industrial applications.





PE-RT Pipe Layering – technical information

1. Polyethylene inner pipe layer (PE-RT).
2. An adhesive layer bonding the inner pipe layer to the oxygen barrier.
3. Ethylene vinyl alcohol copolymer (EVOH) oxygen barrier layer.

EVOH oxygen barrier layer

PE-RT barrier pipe incorporates an EVOH oxygen diffusion barrier layer on the outside of the pipe.The EVOH layer which complies with DIN 4726 renders the pipe virtually impervious to gases.

Certification

Pipes are produced and tested according under an ISO 9001 quality management system to four standards, namely DIN 16833, DIN 4726, ISO22391 and ISO 10508.

Key Performance data

Maximum operating temperature: 80°C.
Maximum operating pressure: as per table below.

Coefficient of linear expansion: 0.18 mm/m K.
Minimum bending radii: 20 X pipe outer diameter.
Thermal conductivity: 0.45 W/m C.

Product Guarantee

ISO 10508 plastic piping system for hot and cold water installations – guidance for classification / design

- Class 1 – hot sanitary water (60°C) – 49 years
- Class 2 – hot sanitary water (70°C) – 49 years
- Class 4 – radiant floor and radiators low temperature (60°C) - 49 years
- Class 5 – radiators high temperature (80°C) – 25 years

Packaging / Storage – Uv Exposure

PE-RT piping should be protected from direct exposure to UV as it is prone to deterioration if subjected to UV / sunlight.

Application Classes

Maximum Operating Pressure (MOP) – 10*1.3 barrier PE-RT Minmum Bending Radius:100mm

Application Class	Design Stress Mpa	MOP (Bar)
1 (60°C) Hot sanitary water	3.29	9.83
2 (70°C) Hot sanitary water	2.68	8.00
4 (60°C) Radiant floor	3.25	9.71
5 (80°C) Radiator high temperature	2.38	7.11
Cold water (20°C)	6.68	19.96

Maximum Operating Pressure (MOP) – 12*1.6 barrier PE-RT Minmum Bending Radius:100mm

Application Class	Design Stress Mpa	MOP (Bar)
1 (60°C) Hot sanitary water	3.29	10.12
2 (70°C) Hot sanitary water	2.68	8.24
4 (60°C) Radiant floor	3.25	10.00
5 (80°C) Radiator high temperature	2.38	7.32
Cold water (20°C)	6.68	20.55

Maximum Operating Pressure (MOP) – 16 x 2.0 barrier PE-RT Minmum Bending Radius:150mm

Application Class	Design Stress Mpa	MOP (Bar)
1 (60°C) Hot sanitary water	3.29	9.40
2 (70°C) Hot sanitary water	2.68	7.65
4 (60°C) Radiant floor	3.25	9.28
5 (80°C) Radiator high temperature	2.38	6.80
Cold water (20°C)	6.68	19.08

Maximum Operating Pressure (MOP) – 20*2.0 barrier PE-RT Minmum Bending Radius:200mm

Application Class	Design Stress Mpa	MOP (Bar)
1 (60°C) Hot sanitary water	3.29	7.31
2 (70°C) Hot sanitary water	2.68	5.95
4 (60°C) Radiant floor	3.25	7.22
5 (80°C) Radiator high temperature	2.38	5.28
Cold water (20°C)	6.68	14.84