

PIPE TECHNICAL DATA

MLCP
PE-RT EVOH
PE-X_a



PRODUCTS FOR THE BUILT ENVIRONMENT



www.tioclimate solutions.co.uk

MLC PIPE



Our pipe is made under license of the HeliKlima pipe made in the EU by Heliroma Plasticos
Certificate Number 2107523

PIPE

MULTILAYER PE-RT / AL / PE-RT – TIO

Raw Material:

PE-RT type II | Aluminium

Standards:

EN ISO 21003 | ISO 22391 | RP 001.71 | HR3.12

Application Fields:

- Drinking water supply systems;
- Heating and cooling systems;
- HVAC systems;
- High temperature heating systems;
- Low temperature heating systems;
- Underfloor heating and colling;
- Compressed air systems.

Profile:

ø 16-75 mm - U | ø 75-110 mm – Flanged



Tio multilayer (TIOMLC) pipes cross-links the best qualities of both metal and plastic pipes in one single system.

It combines the advantages of metal with the corrosion resistance of plastic. The stability of the TIOMLC pipe is ensured by the laser edge welded aluminium.

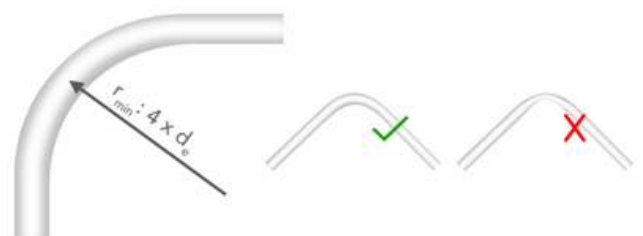
The pipe is built on a 5 layer structure, where the internal and external layers are made of PE-RT type II and middle layer is made of aluminium being all layers connected by a special bonding agent.

TIOMLC pipes can be used for drinking water applications as well as for heating and cooling systems and other industrial applications. The pipe internal wall surface is extremely smooth, avoiding corrosion phenomena and limescale or deposits.

TIOMLC pipes are flexible and easy to bend. The lightweight of the pipe is also an advantage for its use on wall-mounted installations.

PIPE BENDING

The PE-RT / AL / PE-RT – TIOMLC pipe, diameters 16mm which can be bent using a bending tool. Make sure to comply with the specified minimum bending radius. The minimum bending radius refers to the centre of the pipe.



PE-RT PIPE



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PIPE

PE-RT / PE-RT EVOH PIPE

Raw Material:

PE-RT type II

Standards:

ISO 22391 | DIN 16833 | DIN 16834 | RP01.67

Application Fields:

- Underfloor heating and cooling;
- Wall heating and cooling;
- Ceiling heating and cooling;
- Heating systems in general;
- Sanitary system

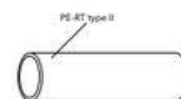
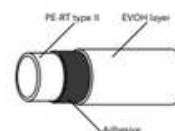
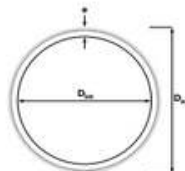
Profile:

DIMENSION 16x2.0

EXTERNAL DIAMETER Dext (mm) Min 16 Max 16.3

EXTERNAL DIAMETER Dext (mm) Min 2.0 Max 2.2

INNER DIAMETER Dint (mm) 12.0



TIOPER is a pipe made of a specially modified polyethylene – PERT type II, with a unique molecular structure and composition which ensures very good thermal stability, high degree of mechanical strength up to temperatures of 90°C and a good long term hydrostatic strength behaviour.

TIOPER can be supplied in a monolayer without an oxygen barrier – PE-RT type II, or a multilayer pipe with an oxygen barrier – PE-RT type II w/EVOH.

The oxygen barrier is achieved by an ethylene vinyl alcohol – EVOH layer, that prevents oxygen penetration in the system which reduces corrosion within the system, preventing premature failing of system compounds. The EVOH layer provides excellent functional barrier against organic solvents, an excellent and exceptional elasticity, protecting product integrity. In a multilayer pipe, all layers are connected permanently using force-fit methods via an adhesive.

PE-RT PIPE



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PIPE

PE-XA PIPE – PEXROMA / EVOH

Raw Material:

crosslinked high-density polyethylene by IR/Peroxide Method

Standards:

EN ISO 15875 | DIN 16893 | RP 01.03

Application Fields:

- Underfloor heating and cooling;
- Wall heating and cooling;
- Ceiling heating and cooling;
- Heating systems in general;
- Sanitary system

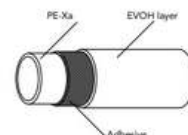
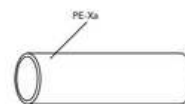
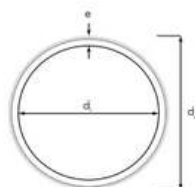
Profile:

DIMENSION 12x2.0

EXTERNAL DIAMETER Dext (mm) Min 12 Max 16.2

EXTERNAL DIAMETER Dext (mm) Min 2.0 Max 2.2

INNER DIAMETER Dint (mm) 7.6



HEATING
SYSTEMS



APPROVED FOR
DRINKING WATER



DISINFECTION
RESISTANT



LEGIONELLA
CONTROL



100%
RECYCLABLE



ECO-FRIENDLY

TIOPEX crosslinked high-density polyethylene pipe is produced by IR/Peroxide method. Crosslinking is a process which transforms the chemical structure in such a way that the polymer chains are linked within themselves into a three-dimensional network through chemical connections. The result is a flexible thermoset polymer with improved mechanical, thermal and chemical properties. The crosslinked polymeric structure makes dissolution impossible, unless its structure is previously destroyed.

The properties of PE-Xa pipe make it the most flexible PE-X pipe on the market and also offers a better resistance to stress than other PE-X pipes, produced by a different method, Silane or Electron beam, PE-Xb or PE-Xc, respectively.

TIOPEX is a PE-Xa pipe with thermal-elastic memory, a greater flexibility that avoids kinking, thus avoiding the risk of bottlenecks which reduce the flow, and allows the optimization of the installation process. TIOPEX can be supplied in a monolayer without oxygen barrier – PE-Xa or a multilayer pipe with oxygen barrier PE-Xa w/EVOH

EVOH PROPERTIES

The Oxygen Barrier is provided by an ethylene vinyl alcohol – EVOH layer prevents oxygen permeability in the system which reduces corrosion within the system, thus reducing premature failing of system components. The EVOH layer provides excellent functional barrier against organic solvents and gases. With its exceptional elasticity it protects the product integrity. The Oxygen Barrier seals the oxygen access, therefore increasing the installation life expectancy. In a multilayer pipe, all layers are connected permanently via adhesive.

PIPE

Produced within the EU to BS EN ISO 22391 under ISO90001 quality control



3 LAYER PE-RT EVOH UFH PIPE TIOPER0001/TIOPER0002/TIOPER0003

The standard 3 layer PE-ERT pipe is used regularly in screed and is the most common pipe for UFH use.



PERT ALU PERT MULTILAYER PIPE TIOMLC0001/TIOMLC0002/TIOMLC0003/TIOMLC0004

MLCP pipe that is PE-RT/AL/PE-RT Pipe, this has better output characteristics and is easier to install in our floor grid system



PE-XA PIPE TIOPEX0001/TIOPEX0002

12mm PE-Xa barrier pipe suitable for use in Underfloor Heating and Wall Hung Radiator systems. Ideal for fitting to castellated panels or direct to insulation the PE-Xa pipe can be easily bent into position and held in place with clips.

**TIOPER0001
TIOPER0002
TIOPER0003**

**3 LAYER PE-RT EVOH UFH PIPE 16 X 2.0 100M COIL
3 LAYER PE-RT EVOH UFH PIPE 16 X 2.0 240M COIL
3 LAYER PE-RT EVOH UFH PIPE 16 X 2.0 500M COIL**

**TIOMLC0001
TIOMLC0002
TIOMLC0003
TIOMLC0004**

**PERT ALU PERT MULTILAYER PIPE 16 X 2.0 100M COIL
PERT ALU PERT MULTILAYER PIPE 16 X 2.0 240M COIL
PERT ALU PERT MULTILAYER PIPE 16 X 2.0 500M COIL
PERT ALU PERT MULTILAYER PIPE 16 X 2.0 200M COIL**

**TIOPEX0001
TIOPEX0002**

**PE-XA PIPE 12 X 2.0 80M COIL
PE-XA PIPE 12 X 2.0 80M COIL**



TIO Climate Solutions
c/o H&H Distribution
Unit X&Y
The Steventon Depot
Hanney Road
OX13 6DJ



www.tioclimate-solutions.co.uk
01235 242710
office@tioclimate-solutions.co.uk