

## PIPE

# PEXROMA | PE-Xa / PE-Xa EVOH

**PEXROMA** 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.

**PEXROMA** 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.

**PEXROMA** can be supplied in a monolayer without oxygen barrier – PE-Xa or a multilayer pipe with oxygen barrier PE-Xa w/EVOH.



Pipe certification.

## ADVANTAGES AND KEY FEATURES

- |   |   |
|---|---|
|  THERMAL AND ELASTIC MEMORY            |  DRINKABLE WATER APPLICATIONS                |
|  HIGH DEGREE OF CROSS-LINKING          |  HIGH RESISTANCE TO TEMPERATURE AND PRESSURE |
|  HIGH CHEMICAL RESISTANCE              |  OXYGEN DIFFUSION BARRIER                    |
|  HIGH RESISTANCE TO STRESS CRACKING    |  EXCELLENT FLEXIBILITY                       |
|  CORROSION AND INCRUSTATION RESISTANCE |  LIGHTWEIGHT                                 |
|  HIGH ABRASION RESISTANCE              |  LOW NOISE                                   |
|  HIGHLY SMOOTH SURFACE                 |  SUPPLIED IN COILS                           |
|  KINKING RESISTANCE                    |  NATIONAL AND INTERNATIONAL CERTIFICATIONS   |

## PE-Xa PRODUCTS

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PEXROMA | PE-XA  
PEXROMA | PE-XA EVOH

HR-FL-PEX-EN 07.22.05  
**HELIROMA - Plásticos, S.A.**  
Zona Industrial  
EN-1 / IC2 km 250,5  
3850-184 Albergaria-a-Velha  
Portugal

GPS:  
Lat: 40.716484°(N)  
Lng: 8.48552° (W)

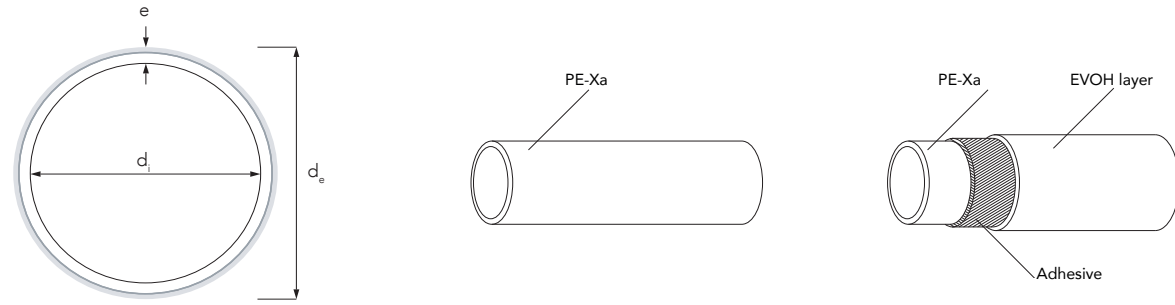
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**HULIOT**  
GROUP

PIPE

PEXROMA | PE-Xa / PE-Xa EVOH  
PRODUCT RANGE AND GEOMETRY



REFERENCE	DIMENSION	EXTERNAL DIAMETER d <sub>e</sub> (mm)		THICKNESS e (mm)		INNER DIAMETER d <sub>i</sub> (mm)	WEIGHT (kg/m)	SINGLE LAYER	EVOH	SERIES
		min	max	min	max					
P-002012-XA	12x2,0	12	12,3	2,0	2,2	7,6	0,063	✓	✓ <sup>(1)</sup>	2.5
P-011016-XA	16x1,8	16	16,3	1,8	2,1	11,8	0,081	✓	✓	4.0
P-001016-XA	16x2,0	16	16,3	2,0	2,3	11,4	0,087	✓	✓ <sup>(1)</sup>	3.5
P-002016-XA	16x2,2	16	16,3	2,2	2,6	10,8	0,095	✓	✓ <sup>(1)</sup>	3.2
P-001017-XA	17x2,0	17	17,3	2,0	2,3	13,0	0,094	✓ <sup>(1)</sup>	✓ <sup>(1)</sup>	3.8
P-001018-XA	18x2,0	18	18,3	2,0	2,3	14,0	0,100	✓ <sup>(1)</sup>	✓ <sup>(1)</sup>	4.0
P-011020-XA	20x1,9	20	20,3	1,9	2,2	16,2	0,112	✓	✓	5.0
P-001020-XA	20x2,0	20	20,3	2,0	2,3	16,0	0,116	✓	✓ <sup>(1)</sup>	4.5
P-002020-XA	20x2,8	20	20,3	2,8	3,2	14,4	0,152	✓	✓ <sup>(1)</sup>	3.2
P-001025-XA	25x2,3	25	25,3	2,3	2,7	20,4	0,161	✓	✓ <sup>(1)</sup>	5.0
P-002025-XA	25x3,5	25	25,3	3,5	4,0	18,0	0,235	✓	✓ <sup>(1)</sup>	3.2
P-011032-XA	32x2,9	32	32,3	2,9	3,3	25,4	0,266	✓	✓ <sup>(1)</sup>	5.0
P-002032-XA	32x4,4	32	32,3	4,4	5,0	27,6	0,364	✓ <sup>(1)</sup>	✓ <sup>(1)</sup>	3.2

Note: standard colour: natural. Other colours on demand.

<sup>(1)</sup> Available on demand.

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.

PARAMETER	VALUE	STANDARD
OTR - 20°C, 0% RH	0.2 cm <sup>3</sup> .20µm/m <sup>2</sup> .day.atm	ASTM D3985
OTR - 20°C, 65% RH	0.4 cm <sup>3</sup> .20µm/m <sup>2</sup> .day.atm	
OTR - 20°C, 85% RH	1.5 cm <sup>3</sup> .20µm/m <sup>2</sup> .day.atm	
OTR - 20°C, 100% RH	1.9 cm <sup>3</sup> .20µm/m <sup>2</sup> .day.atm	

OTR – Oxygen Transmission Rate

PHYSICAL AND CHEMICAL PROPERTIES

PARAMETER	VALUE	STANDARD
DENSITY	953 kg/m <sup>3</sup>	ISO 1183
MFI - 190°C/5.00 kg	0,7 g/10min	ISO 1133
TENSILE MODULUS	1100 MPa	ISO 527
TENSILE STRESS AT YIELD	28 MPa	ISO 527
TENSILE STRESS AT BREAK	37 MPa	ISO 527
BALL INDENTATION HARDNESS	49 MPa	ISO 2039
VICAT SOFTENING TEMPERATURE A50	130°C	ISO 306
VICAT SOFTENING TEMPERATURE B50	79°C	ISO 306
ROUGHNESS	0,007 mm	ISO 5436
THERMAL CONDUCTIVITY	0,35 W/m K	DIN 52612
THERMAL EXPANSION COEFFICIENT	1,4x10 <sup>-4</sup> m/m °C	VDE 0304
LINEAR COEFFICIENT	0,026 mm/m K	-
FIRE CLASSIFICATION	B2	DIN 4102
SMALLEST BEND RADIUS	5 x d <sub>e</sub> mm	DIN 4721
POLYETHYLENE CROSSLINKING METHOD	IR/Peroxide	-
DEGREE OF CROSSLINKING	≥70%	-

LEAKAGE TEST

All **HELIROMA** products must be submitted to a leakage test as per procedures stated in **HR** Technical Catalogue.

The product warranty is only valid if the leakage test has been performed, on the date the system has been installed.

APPLICATIONS:

- Drinking supply water systems;
- Underfloor heating and cooling;
- Wall heating and cooling;
- Ceiling heating and cooling;
- Heating and cooling systems in general.

APPLICATION CLASSES AND ADMISSIBLE PRESSURES

Application Class 1 – Hot water supply 60°C

Application Class 2 – Hot water supply 70°C

Application Class 4 – Underfloor heating and low temperature radiators

Application Class 5 – High temperature radiators

APPLICATION CLASS	P <sub>0</sub> (bar) SERIES					
	2.5	3.2	3.5	4.0	4.5	5.0
1	10	10	10	8	8	6
2	10	10	10	8	6	6
4	10	10	10	10	8	8
5	10	10	8	8	6	6

NEW  
Single layer coloured



STANDARDS

**EN ISO 15875**  
Plastics piping systems for hot and cold-water installations - Crosslinked polyethylene (PE-X).

**DIN 16892**  
Crosslinked polyethylene (PE-X) pipes: general quality requirements, testing.

**DIN 16893**  
Crosslinked high-density polyethylene (PE-X) pipes – Dimensions.

**RP01.03**  
Rules for crosslinked polyethylene (PEX) piping systems for hot and cold water installations.