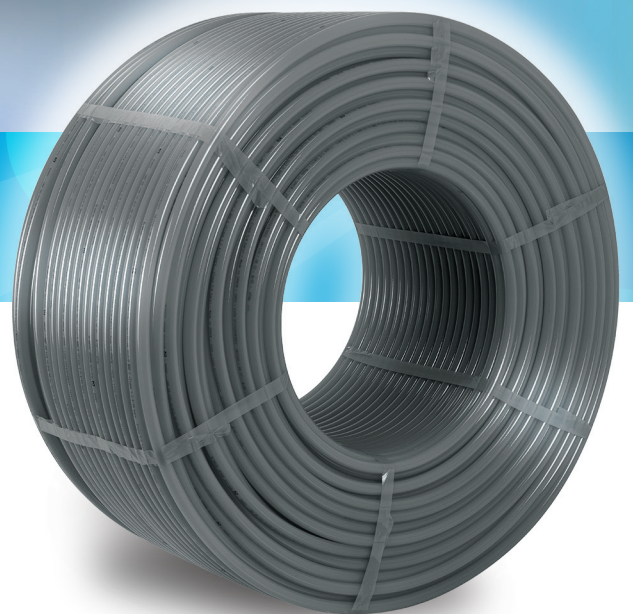
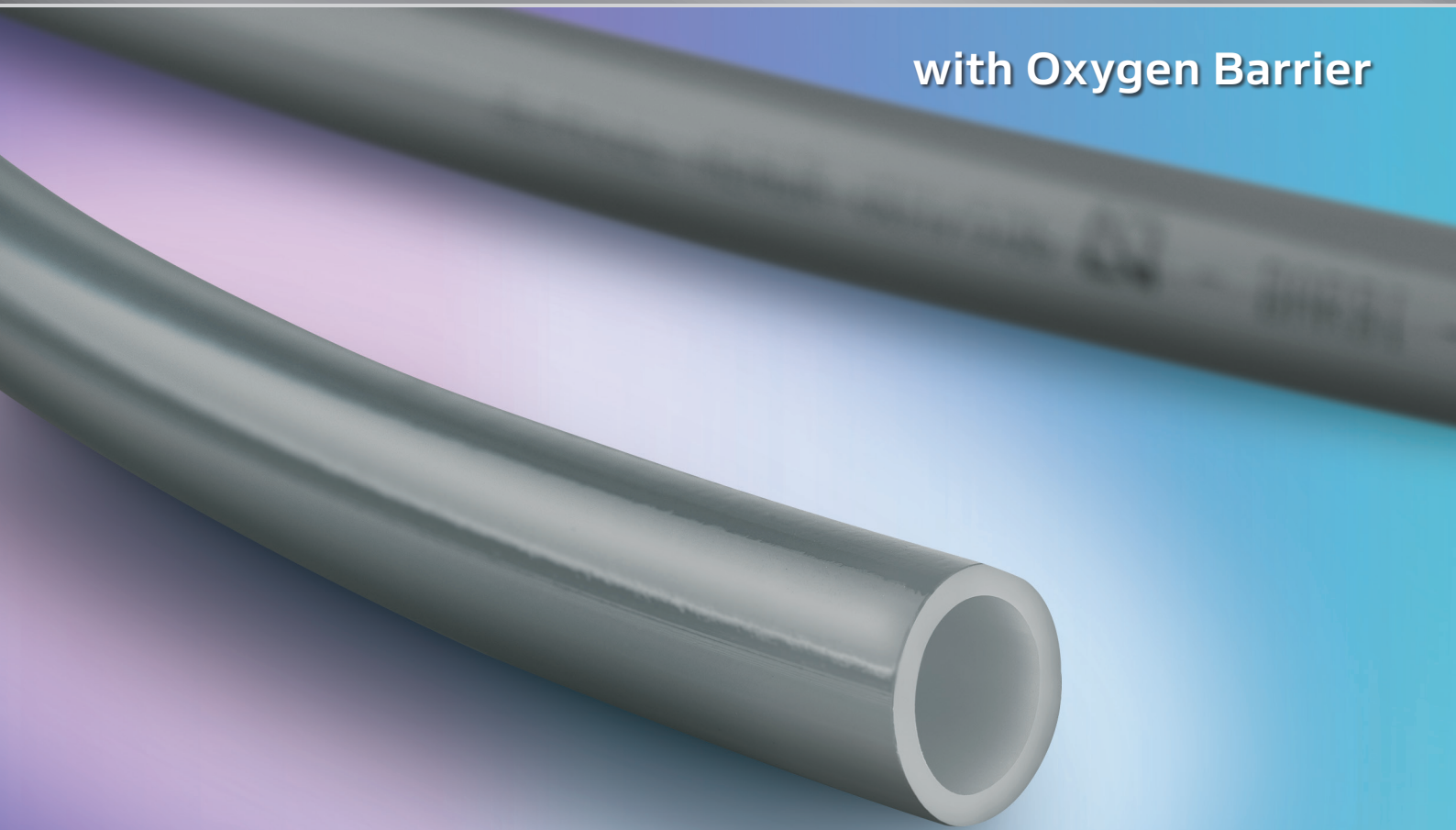




Floor Heating System Pipes  
**PEX-a PERT-Type II**

with Oxygen Barrier



**New generation pipes developed  
for floor heating systems**

# Alarko PEX-a (Cross-linked polyethylene-peroxide method) and Alarko PERT-Type II (ethylene and octane copolymer) are the new generation pipes developed for floor heating systems.

## Specifications Common to Both Types:

- **They are Oxygen Proof (EVOH):** EVOH is a thin layer of copolymer ethyl-vinyl alcohol that prevents permeability. It prevents oxygen from diffusing into the water in the pipe, thus preventing corrosion of metallic parts in the installation and prolonging the life of the installation. EVOH coated pipes combine the advantages of PEX-a and PERT-Type II and EVOH oxygen impermeability properties. These pipes:
  - It has the same specifications as PEX-a and PERT Type II pipes in terms of temperature and pressure resistance and warranty period.
  - The same fittings used for PEX-a and PERT-Type II pipes are used.
  - Thermal memory characteristics are the same as PEX-a and PERT-Type II pipes.
  - They can be used for both heating and drinking water, as they comply with UNE-EN ISO 15875 (withstand temperatures of 95 °C and even 110 °C for a short time).
- **Corrosion Resistance:** Most chemicals (acids, bases, antifreeze, etc.) cannot affect the Alarko pipes, and the pipes are resistant to all kinds of corrosion.
- **Resistance to Frost:** The pipes do not burst when the water inside them freezes. The pipe expands easily thanks to its flexibility.
- **Higher Flow:** Due to their smooth surface, ALARKO pipes show less pressure loss than metal and higher flow is obtained with the same inner diameter.



- **Absence of Scale and Other Material Deposits:** Thanks to their extremely smooth surface, the scaling observed on metal pipes is not observed here, the initial flow values are maintained.
- **No Electrical Conductivity:** ALARKO pipes do not form any galvanic corrosion.
- **Lightweight:** ALARKO pipes are 4 times lighter than copper pipes of equivalent diameters, and easy to use and carry.
- **They Do Not Transmit Sound:** Thanks to their ethylene construction and flexibility, they do not make noise (up to 2.5 m/sg) even at high water flow rates compared to metal pipes.
- **Narrow Bending Radius:** The bending radius is 10 times its outer diameter in manual operation and 5 times when ALARKO protection pipe is used.

## Recommendations

- The pipes should be stored in their original packaging. They should be kept away from direct sunlight.
- Avoid contact with hard and sharp-edged materials that may damage the product during transportation and assembly.
- The pipes should be cut with appropriate cutters and it has to be ensured that the cutting area is free of burrs.
- Direct flame should never be used to bend the pipes.
- Plastic clip material should be used to fix the pipes to the styrofoam. Using metal materials (such as wire) may damage the product.
- After the installation is finished, it is mandatory to perform a pressure test as specified in the UNE-ENV 12108 norm.

## Quality Control

Alarko pipes are continuously tested to ensure quality assurance. Blansol, the manufacturer, has a laboratory equipped with the latest technology to perform all the necessary tests on the pipes in quality control devices.

Alarko pipes are certified by AENOR (Spanish standard organization).



## Distinctive Features of PEX-a Pipe:

- **Cross-linked and oxygen-proof** PEX-a pipes are produced according to EN 1264-4 standard.
- They are produced with **Monosil technology**, which is also used in optical cable production. This technology provides 35% higher pressure resistance in the pipes compared to other production methods. The bonds between the polyethylene chains formed by the monosil technique are three-dimensional, not two-dimensional, as in other production methods. Therefore, the bonds are stronger, which raises the resistance.
- **Flexibility:** PEX-a pipes show more flexibility than PEX pipes cross-linked by other methods. It can be easily cold-bent without special tools, saving connections and installation time.
- **High Temperature Resistance:** PEX-a pipes can withstand continuous temperatures up to 95 °C and peak temperatures up to 110 °C.
- **High Pressure Resistance:** PEX-a pipes are 35% more resistant to pressure than pipes produced by other production methods, thanks to the three-dimension provided by the difference in the production method to the cross-links.
- **Thermal Memory:** PEX-a pipes regain their original shape when hot air is applied. This allows assembly errors to be easily corrected and repairs to be made more easily.



**Areas of Use:** The main area of use of PEX-a pipes is floor heating applications. However, they can also be used in the following areas:

- Radiator heating installation fed from conventional boiler.
- Radiator heating installation fed from condensing boiler.
- Air conditioning/air conditioner systems.
- Hot and cold water drinking and domestic water installation.

## Specifications of PERT-Type II Pipes:

- Oxygen-proof PERT-Type II pipes with ethylene and octane copolymer are produced according to EN 22391-2 standard.
- **Flexibility:** PERT-Type II pipes are well suited for applications that require very frequent bending, such as floor heating. It can be easily cold-bent without special tools, saving connections and installation time.
- **Areas of Use:** The main area of use of PERT-Type II pipes is floor heating systems. However, they can also be used in low-temperature and low-pressure drinking water systems and similar applications.



## Technical Specifications

Specification	Unit	PEX-a	PERT-Type II
Maximum Operating Temperature	°C	95	95
Maximum Operating Temperature (during peak 100 Hours)	°C	110	110
Maximum Operating Pressure (at 95 °C)	bar	10	4
Density	g/cm <sup>2</sup>	0.945	0.941
Linear Expansion	m/m °C	0.14	0.19
Thermal Conductivity	W/mK	0.38	0.40

## Manufacturer

### INDUSTRIAL BLANSOL SA-SPAIN,

One of the leading companies in Europe in the production of accessories and plastic pipes (cross-linked and multilayer polyethylene pipes) and brass fittings for plumbing.

**BLANSOL's** activities in the industry of brass fittings began in 1955 and its operations in the field of plastics began in the early 1960s.

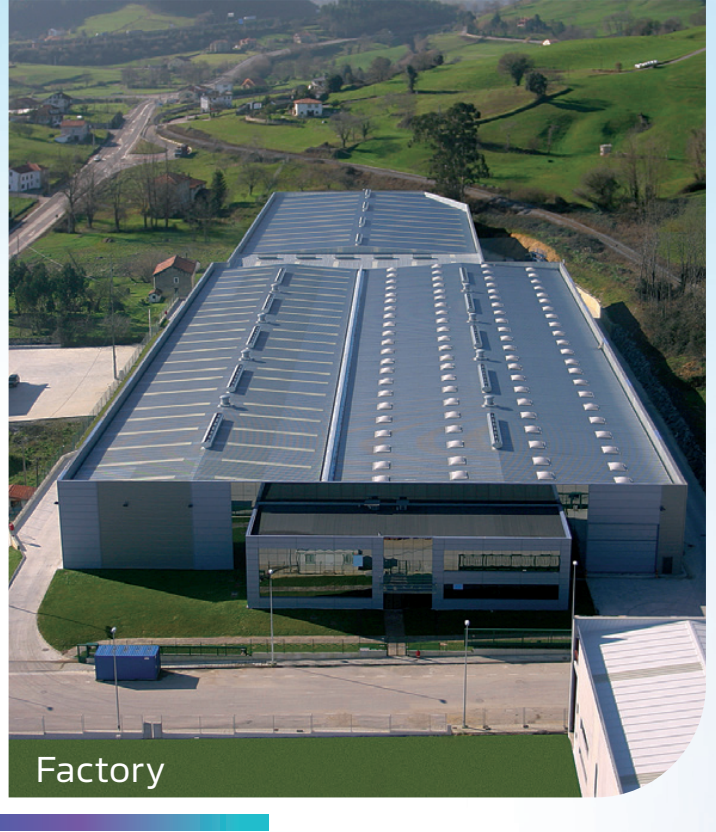
**BLANSOL** has a great business tradition that understands customer needs. The company is sensitive to the issues faced by the customers, and shares its dreams and projects with the customers.

The **two production facilities** have **the most advanced technology**, enabling them to be the **leading company in their sector** in Southern Europe and to compete fairly with their European competitors.

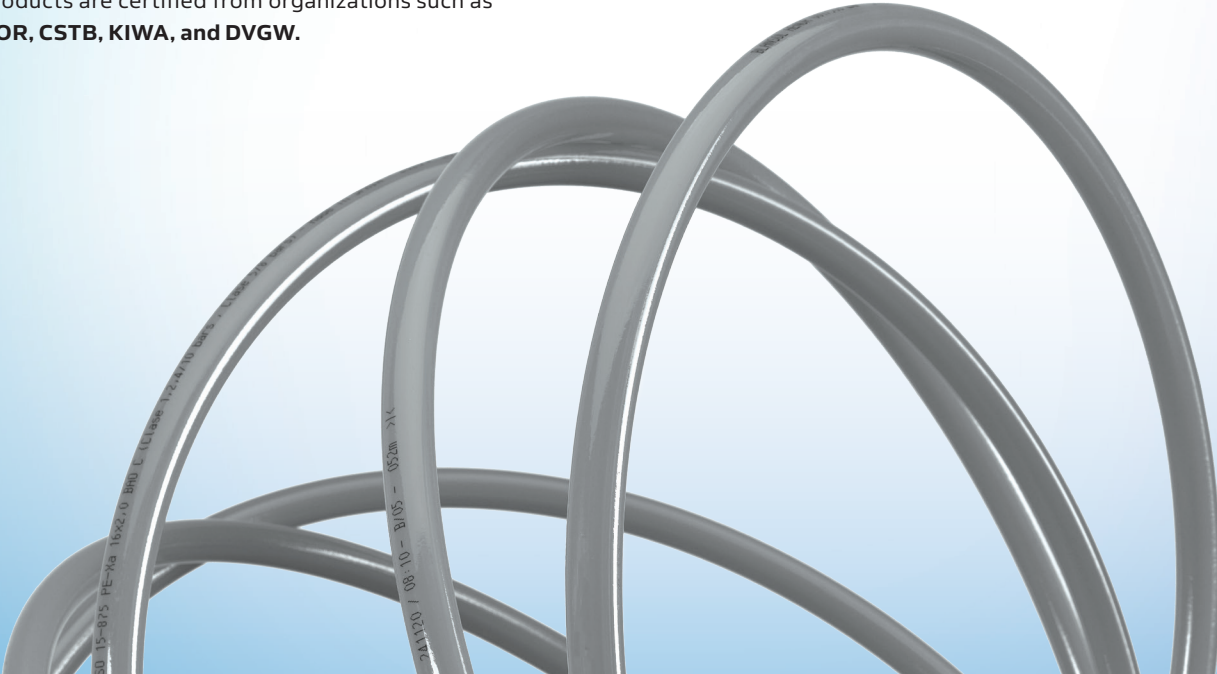
The **35,000-square-meter** pipe production facility is one of **the most modern** factories in the industry in Europe, with an annual production capacity of 80 million meters with 13 extrusion lines.

Operating **in more than 50 countries** **BLANSOL** exports **75% of its** production.

Its products are certified from organizations such as **AENOR, CSTB, KIWA, and DVGW.**



Industrial **Blansol sa**



Manufacturer reserves the right to change any product specifications without notice.

 **ALARKO**



**ALARKO CARRIER**  
**SANAYİ VE TİCARET A.Ş.**