1. Product Description

PEX-a (peroxide-method) cross-linked monolayer pipe, complying with European Norm EN 15875-2.

2. Properties of the BARBI PEX-a pipes

Industrial Blansol combines the best polyethylene available and the most modern peroxide-method cross-linking technology to manufacture amazing performance PEX-a pipes.

Blansol's moder technology is based on the peroxide-method crosslinking, through the use of high power infrared radiation furnaces.

BARBI PEX-a pipes offer:

- Highly competitive price
- The highest flexibility
- The highest resistance to pressure
- The longest lifetime
- The highest resistance to bending collapse

3. Technical Specification

Property	Rate
Linear dilatation	$1{,}4x10^{-4}\ K^{-1}$
Thermal conductivity	0,38 W/mK
Max. Work Temperature	95 ºC – 203ºF – 368'15ºK
Max.Temperature (Tpeak)	110ºC – 230ºF – 383'15ºK
Max. Pressure (95ºC-203ºF-368'15ºK)	6 bar (for serie 5) *
	10 bar (for serie 3,5) **
	10 bar (for serie 3,2) ***
Roughness	0,007 mm
Density	$0{,}945\ g/cm^2$

* Serie 5 matches dimensions 16x1'8, 20x1'9, 25x2'3, 32x2'9
** Serie 3,5 matches dimensión 16x2'0
*** Serie 3,2 matches dimensions 16x2'2, 20x2'8, 25x3'5, 32x4'4

4. Operating conditions

Temperature (ºC)-(ºF)-(ºK)	Service life (years)	Operating pressure	Safety coefficient
20 – 68 – 293.15	50	18.75	1.5
40 – 104 – 313.15	50	15.75	1.5
60 – 140 – 333.15	50	12.00	1.5
80 – 176 – 353.15	25	10.00	2.0
95 – 203 – 368.15	25	8.00	2.0

5. Characteristics of the corrugated pipe

Flexible Polypropylene pipe, bendable, suitable to be embeded into walls.

Inner pex-a pipe diameter (mm)	Corrugated outer diameter (mm)	Corrugated inner diameter (mm)	Tolerance (mm)
12	23,0	16,5	+0/-0,3
16	26,0	19,5	+0/-0,3
20	31,5	25,0	+0/-0,3
25	40,5	32,0	+0/-0,4

6. Advantages of the BARBI PEX-a pipes

- Simplicity of instalation. No welding or machining operations are necessary. The associated fittings give the system simplicity and savings.
- Flexibility.The PEX-a pipes show more flexibility than PEX pipes crosslinked by other methods. They can be cold bent easily, without special tools, saving connections and installation time.
- Resistance to high temperature. **BARBI pipes are suitable to be used at usual work temperatures up to 95ºC and they are able to withstand accidental temperature peaks up to 110ºC**.
- Resistance to frost. BARBI pipes don't burst for water freezing inside. The pipe, du to its flexibility, would simply expand.
- Resistance to high pressure. BARBI pipes, due to the manufacturing process, are more resistant to high pressure, exceeding by more than 35% the ones manufactured using other crosslinking methods.
- Low heat conductivity coefficient. Their low heat conductivity coefficient (**0'38W/mºC**) allows saving energy through the reduction of heat loss as well as the frequent water condensation on copper pipes.
- Resistance to corrosión. **BARBI pipes can't be attacked by most chemical substances (acid, base, anti-freeze,etc) and are resistant to every kind of corrosion**.
- Higher flow. **Due to their smooth Surface, BARBI pipes show smaller pressure loss than metal ones. With them, it's achieved higher flow with the same inner diameter.**
- Lack of lime and other materials deposits. Also due to their extremely smooth surface, lime deposits, so frequent in metal pipes, are avoided. BARBI pipes ensure that the original flow will be upheld forever.
- No electricity conductive. BARBI pipes don't generate any kind of galvanic corrosion.
- Lightness. BARBI pipes are 4 times lighter than copper pipes in equivalent diameters, what makes them easy to handle and transport.
- Suitable for drinking water. BARBI pipes don´t modify the organoleptic properties of water.
- They don´t convey noise. **Due to they are manufactured with polyethylene** and it's flexibility, it is achieved low transmission of acoustic waves, even at high water flow speed (up to 2'5 m/sg),compared with metal pipes.
- Thermical memory effect. BARBI pipes regain their origibal shape when it's applied hot air, what allows to correct installation mistakes and to carry out repairs more easily.
- Narrow bending radius. **Their largest bending radius is 10 times the external diameter when bent manually and 5 times using the outer foil pipes BARBI.**

7. Dimensions and presentation

Dimension	Length (m)	Packaging
16x1,8	100	Box 6 rolls
20x1,9	50	Box 7 rolls

8. Recommendations

- Keep the pipe in its original package. Avoid the exposure to direct sunlight, what may damage the product.
- Avoid contact with hard and cutting-edged materials, what may damage the product during its transport and installation.
- **Cut the pipe with suitable scissors making sure that the cut is clean.**
- **Never use a direct flame to bend the pipe.**
- Use plastic material to fix the pipe (clips, etc.). Using metal materials (such as wire) may damage the product.
- After installing the pipe, it is mandatory to carry out a pressure test, as it is indicated in the norm UNE-ENV 12108.

9. Quality controls

All PEX-a pipes are continuously tested to ensure that the products are correct.

Industrial Blansol has a laboratory equipped with the latest technology in quality control devices, that perform all the demandable tests to the pipes.

BARBI PEX-a pipes are manufactured complying with European Norm EN 15875. They have the Product Certificate issued by AENOR (Spanish standard)

10. Labelling

All pipes are labelled with permanent ink on every meter, showing the following message:

- AENOR 001/506 – Our quality Brand, according to the AENOR Product Certificate
- BARBI – Our comercial Brand
- PEX-a - PEX-a cross-linked polyethylene pipe
- Diameter x thickness (mm)
- Aplication class and design pressure
- UNE-EN ISO 15875 – Reference norm for pipes production and certification
- Manufacturing date
- Length

11. Applications of BARBI PEX-a pipes

- Water installations (cold and hot water)
- Radiators heating installations
- Radiant floor heating installations
- Air conditioned installations
- Other applications