



## PRODUCT TECHNICAL SPECIFICATION BARBI PEX-b PIPES

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### 1 Product Description

- PEX-b (silane method) cross-linked monolayer pipe, complying with the European Norm EN 15875-2.
- The BARBI cross-linked polyethylene pipes are manufactured using the Monosil technology, that comes from the optic fibre manufacturing, and ensures a resistance to pressure by 35% higher than obtained with other manufacturing methods.
- This higher resistance of the MONOSIL method in relation to other manufacturing methods is achieved because the links between the polyethylene chains are tridimensional, that is, they are stronger than the links obtained by other manufacturing methods, where those are bidimensional.

### 2 Tehnical Specification

Property	Rate
Density	0'945 g/cm <sup>3</sup>
Linear dilatation	1'4x10 <sup>-4</sup> K <sup>-1</sup>
Max. Work Temperature	95°C – 203°F – 368'15°K
Max. Temperature (Tmal)	110°C – 230°F – 383'15°K
Min. Work Temperature	-40°C - -40°F – 233'15°K
Max. Pressure (20°C-68°F-293'15°K)	15 bar
Max. Pressure (95°C-203°F-368'15°K)	4 bar
Thermal conductivity	0'38 W/m °K
Roughness	0'007 mm

### 3 Operating conditions

Temperature (°C)-(°F)-(°K)	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

### 4 Advantages of the BARBI PEX-b EVOH pipes

- Simplicity of installation. No welding or machining operations are necessary. The associated fittings give the system simplicity and savings.
- Resistance to high temperature. BARBI pipes are suitable to be used at usual work temperatures up to 95°C and they are able to withstand accidental temperature peaks up to 110°C.
- Resistance to frost. BARBI pipes don't burst for water freezing inside. The pipe, due 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/m°C) allows saving energy through the reduction of heat loss as well as the frequent water condensation on copper pipes.
- Resistance to corrosion. 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.



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- 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 its 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.
- Thermal memory effect. BARBI pipes regain their original 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.

### 5 Recommendations

- Keep the pipe in its original package. Avoid the exposure to direct sun, 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. Every installation must be tested at room temperature and at a pressure of 20kg/cm<sup>2</sup>.

### 6 Quality Controls

All BARBI PEX-B cross-linked pipes are continuously tested to ensure that the products are right. Industrial Blansol has a laboratory equipped with the latest quality control devices, in which all the demandable tests are performed.

The BARBI PEX-b pipes are manufactured according to the norm UNE-EN-ISO 15.875.

The BARBI PEX-b pipes are certificated with AENOR and CSTBat:



001/004287



60-1681\_V2

### 7 Pipe Labelling

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

- Industrial Blansol
- AENOR 001/506 - Our quality Brand, according to the AENOR Product Certificate
- CSTBat 60/1681 - Our quality Brand, according to the CSTBat Product Certificate
- UNE-EN-ISO 15.875 - Reference norm for pipes production and certification in Europe
- PE-Xb
- Diameter x thickness (mm).
- Application class and design pressure
- Made in Spain – pipe manufactured in Spain
- Lot (manufacturing date)
- Length



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### 8 Package Labelling

The package label includes the following information:

- Pipe reference
- Product description (4 different languages)
- Dimension
- Bar code
- Roll length
- Traceability code (SAAS)
- Certifications



### 9 BARBI Warranty

The PEX-b pipes and the brass accessories of the Easypress linking system are guaranteed for 15 years at a maximum of 1.5 M€, for damages caused by product design or manufacturing.

