

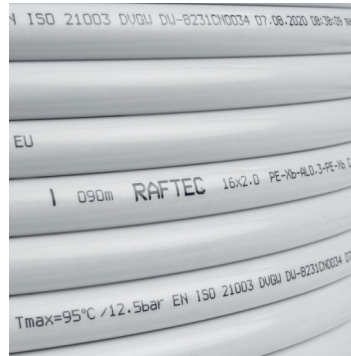


TECHNICAL PASSPORT OF THE PRODUCT

Metal-polymer pipe PeXb-AL0.3-PeXb

1. Purpose and scope of application

Raftec pipes "PEXb-AL0.3-PEXb" are used in drinking and domestic-drinking systems, hot water supply, water heating, water-heated floor and wall systems, ground heating, and also as process pipelines transporting liquids that are non-aggressive to pipe materials. The pipes are connected using **Raftec** compression fittings.



2. Technical specifications

№	Characteristic	Designation		
		MPT1620100	MPT1620240	MPT2020100
1	Article	MPT1620100	MPT1620240	MPT2020100
2	Outer diameter, mm	16		
3	Inner diameter, mm	12.0		
4	Wall thickness, mm	2.0		
5	Thickness of aluminum layer, mm	0.3		
6	Thickness of the inner PEX layer, mm	1,0		
7	Length of the bay, m	100	240	100
8	Coil diameter, cm	80		
9	Weight of 1 m.p. of pipe, g	115		
10	Volume of liquid in 1 m.p.	0.113		
11	Operating temperature at 10 bar pressure, °C	0-95		
12	Maximum operating temperature, °C	95		
13	Maximum short-term permissible temperature, °C	95		
14	Nominal pressure PN, bar	10		
15	Equivalent uniform-grain roughness coefficient, mm	0.007		
16	Thermal conductivity coefficient of walls, W/(m · K)	0.45		
17	Minimum manual bending radius, mm	80		100
18	Bending radius using a conductor or pipe bender, mm.	45		60
19	Operation class	5		
20	Method of crosslinking polyethylene	B		
21	The degree of crosslinking of the base layer material, %	>65		
22	Flammability group	Г4		
23	Coefficient of linear expansion, mm/m (°C)	1,8 x 10 ⁻⁴		
24	Service life of the pipe under the specified operating conditions, years	50		

3. Installation instructions

1. Installation must be performed by qualified and competent personnel.
2. Installation of pipes must be carried out at an ambient temperature of at least 10°C using a tool specially designed for this purpose.
3. It is recommended to use Raftec compression fittings as pipe connectors. When working with these fittings, please follow the instructions in the relevant technical data sheets.
4. Flattening and breaking of the pipeline during installation is not allowed. In case of "kinking", the damaged section of the pipe must be destroyed.
5. Coils of pipes stored or transported at temperatures below 0°C must be kept for 24 hours before rolling at a temperature of at least 10°C.
6. Free ends of pipes must be closed with plugs to prevent dirt and debris from entering the pipe.
7. The pipe should be laid without allowing tensile stress.
8. The underfloor heating pipeline must be filled with concrete mortar or closed only after hydraulic testing for tightness. The pipe must be under a pressure of 0.3 MPa during filling;
9. The minimum height of the solution poured above the pipe surface must be at least 3 cm.
10. The pipe should be protected from exposure to direct sunlight.
11. Prevent ice from forming inside the pipe to avoid damage.
12. The pipe must be operated under the conditions specified in the tables in section No. 2 "technical characteristics".
13. The placement of fixed supports on the pipeline should be designed in strict accordance with the instructions of SP 41-102-98.
14. The design and installation of pipelines must be carried out so that the pipe can move freely within the limits of the calculated expansion value. This is achieved by means of compensating capabilities of the pipeline elements (self-compensation), installation of temperature compensators and correct placement of supports (fasteners). Fixed pipe fasteners must direct the extension of the pipelines towards these elements.
15. The value of linear expansion of pipelines L is determined by the formula: $\Delta L = \alpha \cdot L \cdot \Delta t$, where: L is the length of the pipeline, m; Δt is the calculated temperature difference (between the operating temperature and the installation temperature), °C; α is the coefficient of linear expansion of the pipe material, mm/(m°C).

4. Storage and transportation

1. During rail and road transportation, coils (packages) of pipes are allowed to be transported only in covered rolling stock.
 2. To avoid damage to the pipes, they should be laid on a flat surface, without sharp protrusions and irregularities. Dropping pipes from vehicles is not allowed.
 3. Pipes must be stored in accordance with conditions 5 (OZH4), section 10 of GOST 15150 in ventilated sheds or rooms.
 4. Pipe coils may be stored in stacks no higher than 3 m. When stored, pipes must be protected from direct sunlight.
 5. The pipe must be stored in the manufacturer's packaging under storage conditions 3 according to GOST 15150-69.
 6. Pipe transportation must be carried out in accordance with requirements 5 of GOST 15150-69.
-

5. Utilization

Disposal of the product (melting, burial, resale) in accordance with the procedure established by the Law of Ukraine of 1992 No. 50, Art. 678, (as amended by No. 2556 - III (2556-14) of 21.06.2001, No. 48, Art. 252 "On Atmospheric Air Protection" (as amended by 14.07.2016), of 1998 No. 36-37, 242 "On Waste" (as amended by 09.04.2015), of 1991 No. 41, Art. 546 "On Environmental Protection" (as amended by 04.10.2016), as well as other norms, acts, rules, orders, etc.

6. Warranty obligations

1. The manufacturer guarantees that the products comply with safety requirements, provided that the consumer complies with the rules of use, transportation, storage, installation and operation.
2. The warranty covers all defects caused by the manufacturer's fault.
3. The warranty does not cover defects that occur in the following cases:
 - violation of passport regimes for transportation, storage, installation, operation and maintenance of the product;
 - improper transportation and loading and unloading operations;
 - the presence of traces of exposure to substances that are aggressive to the product materials;
 - the presence of damage caused by fire, natural disasters, force majeure circumstances;
 - the presence of damage caused by incorrect actions of the consumer;
 - the presence of traces of third-party interference in the design of the product.
4. The manufacturer reserves the right to make changes to the product design that do not affect the declared technical characteristics.

7. Warranty terms and conditions

1. Claims for the quality of the goods may be made during the warranty period.
 2. Defective products during the warranty period are repaired or exchanged for new ones free of charge. The decision to replace or repair the product is made by the service center. The replaced product or its part obtained as a result of the repair becomes the property of the service center.
 3. The costs associated with dismantling, installation and transportation of the defective product during the warranty period are not reimbursed to the Buyer.
 4. In cases where the claim is unfounded, the costs of diagnostics and examination are paid by the Buyer.
 5. Products are accepted for warranty repair (as well as when returned) fully equipped.
-

WARRANTY CARD № _____

Product name _____
Brand, article, size _____
Quantity _____
Name and address of the trading organization _____
Date of sale _____ Seller's signature _____

Stamp or seal
of the trading organization

I AGREE with the conditions:
BUYER _____
(signature)

The warranty period is seven years (eighty-four months) from the date of sale to the end consumer.

For warranty repair, complaints and claims regarding the quality of products, please contact the service center at the address: 08132, Kyiv region, Vyshneve, Kyivska st., building 6b.
Tel.: + 38(050)-315-16-33

When making claims regarding the quality of the goods, the buyer shall provide the following documents:

1. A statement in any form, indicating:
 - name of the organization, full name of the buyer, actual address and contact phone number;
 - name and address of the organization that performed the installation;
 - main system parameters;
 - short description of the defect;
2. Document proving the purchase of the product;
3. Hydraulic test certificate of the system in which the product was installed;
4. A completed warranty card issued on the manufacturer's website «raftec.eu».

Return or exchange mark: _____

Date _____ y. Signature: _____