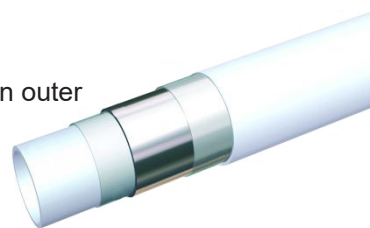


AC-FIX MULTILAYER PEX/AL/PE PIPES

AC-FIX MULTILAYER pipes are composed of an inner layer of PEX, an outer layer of PE and an intermediate layer of aluminum. These layers are bonded together with a special adhesive for high temperatures.



AC-FIX MULTILAYER pipes are manufactured according to the UNE-EN ISO 21003 standard and certified by AENOR according to said standard.

AC-FIX MULTILAYER pipes are compatible with AC-FIX PRESS-MULTI AND PRESS DUO FITTINGS AND VALVES.

FIELDS OF APPLICATION OF 50 YEARS (UNE-EN ISO 21003)

Application class	Design temperature T_D °C	Time at T_D (Years)	T_{max} °C	Time at T_{max} (Years)	T_{mal} °C	Time at T_{mal} (hours)	Typical field of application
1 ^a	60	49	80	1	95	100	Hot water supply (60°C)
2 ^a	70	49	80	1	95	100	Hot water supply (70°C)
4 ^b	20	2.5	70	2,5	100	100	Underfloor heating and and low temperature radiators
	40	20					
	60	25					
5 ^b	20	14	90	1	100	100	High temperature radiators
	60	25					
	80	10					

T_D : Design temperature (normal work) T_{max} : Maximum temperature T_{mal} : Malfunction temperature

^a A country may select either class 1 or class 2 to conform to its national regulations.

^b Where more than one design temperature appears for any class, the times should be aggregated (for example: the design temperature profile for 50 years of class 5 is: 20°C for 14 years, followed by 60°C for 25 years, 80°C for 10 years, 90°C for 1 year and 100°C for 100 hours). This allows to simulate approximate real temperatures and times during a useful life of 50 years.

ADVANTAGES OF AC-FIX MULTILAYER PEX/AL/PE PIPES

AC-FIX MULTILAYER pipes combine the advantages of metal pipes and plastic pipes: dimensional stability, flexibility and resistance to corrosion.

- Very high flexibility. They can be bent manually while maintaining permanent shapes and curvatures.
- It is impermeable to the diffusion of oxygen.
- Low pressure drop and low acoustic transmission.
- Resistance to corrosion, abrasion and attack by chemical products.
- There are no adhesions and incrustations.
- Sanitary quality. Plastic pipes are totally non-toxic, not changing the properties of the fluid that goes inside (color, taste, smell).
- Resistance to all actions applied in the prevention and control of legionellosis.
- Its low coefficient of thermal conductivity reduces condensation and heat losses.
- Low coefficient of linear thermal expansion, allowing to be at the level of the metal tubes on that aspect.
- Aesthetics in visible heating and / or plumbing installations.
- AC-FIX MULTILAYER pipes comply with the provisions of Royal Decree 140/2003 "Criteria Hygienic-Sanitary of the quality of water for human consumption".
- They comply with the established precepts regarding construction materials of the CTE point 6.1. of the HS4 health document.

PROPERTIES OF AC-FIX MULTILAYER PEX/AL/PE PIPES:

MECHANICAL PROPERTIES	UNIT OF MEASUREMENT	VALUE	RULE
Linear dilation	mm/m °K	0.025	ASTM D-696
Thermal conductivity at 60°C	W/m°K	0.40	DIN 52612-1
Coefficient of thermal expansion	10 ⁻⁴ /K	1.8	DIN 53752 A
Tensile adhesion	N/cm	≥ 25	UNE-EN ISO 21003
Tensile adhesion after temperature cycling	N/cm	≥ 15	UNE-EN ISO 21003
Elongation at break	%	400	DIN 53455
Rugosity	mm	0.007	
O2 permeability	g/m3d	< 0.001	
Burst pressure	bar	80	
Induction time to oxidation	min	> 20	UNE-EN 728
Density	Kg/m3	> 947	ISO 1183
Thermal stability (110°, 1,9MPa, 8760h)	bar	Not break	UNE-EN 921
Melt index (mass)	%	+/- 20	UNE-EN ISO 1133
Volatile mass content	mg/Kg	< 350	UNE-EN 12099
Specific weight	g/cm2	2.7	EN 485-2
Breaking strain	N/mm ²	90 - 140	EN 485-2
Elongation A50	%	30	EN 485-2
R _{p0.2}	MPa	> 30	EN 485-2