Pert-Al-Pert Pipe Datasheet

Collaboration and Innovation

Description



Alpert: multilayer PE-RT/AL/PE-RT pipe for underfloor heating, heating systems and sanitary systems.The Alpert pipe belongs to the new generation of multilayer pipes for thermosanitary systems.It is made of composite material, make homogeneous and integral by means of a technologically advanced process with which a PE-RT pipe is made (polyethylene not cross-linked with high resistance to high temperatures), reinforced by an aluminium core, welded and externally coated by another PE-RT layer.

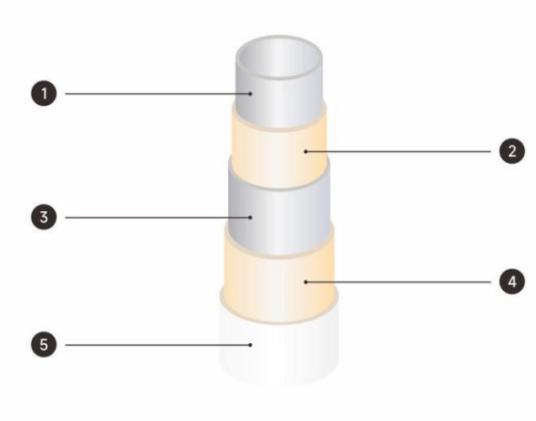
The Alpert pipe combines the excellent characteristics of the PE-RT with the properties of the thin metal layer, which determines new benefits:

- shape stability combined with excellent flexibility
- contained linear expansion, similar to a metal pipe
- oxygen barrier 100% safe
- good thermal conductivity
- possibility to use fittings to be stapled

Alpert is the ideal pipe to easily lay the underfloor heating circuits. Its ability to maintain its shape allows for a considerable reduction of the anchors on the panels, particularly appreciable with the Plan Floor panel.

Construction

1. Inner pipe in PE-RT.
2. Connection layer that joins the inner pipe with the aluminium pipe.
3. Aluminium pipe seam welded (thickness 0.21 mm for the size Ø 12x1.6,thickness 0.25 mm for the size Ø 15x2.0 , thickness 0.25 mm for the size Ø 16x2.0).
4. Connection layer that joins the external pipe with the aluminium pipe.
5. External pipe in PE-RT.



Dimension Data				
Alpert pipe external Ø	mm	12	15	16
Alpert pipe internal Ø	mm	8.8	11	12
Overall thickness	mm	1.6	2.0	2.0
Aluminum sheet thickness	mm	0.21	0.25	0.25
Weight	Kg/m	0.065	0.096	0.100
Water content	ℓ/m	0.05	0.1	0.11
Packs nude pipe (roll)	m	80/160/240	50/100	50/80/100/150/200/300/500

Technical data

Classes of application (UNI EN ISO 21003 - see table previous page “Classification of the conditions of use”): 2/10 bar, 5/10 bar

Maximum operating conditions for 50 years:

- Design temperature TD = 70 °C
- Design pressure PD = 10 bar

Max temperature for short periods: 95 °C
Coefficient of linear expansion: 0,026 mm/m °C
Thermal conductivity: 0,45 W/m K
Minimum radius of bending: 5 x D pipe
Surface roughness of the internal tube: 1-1.4 µm
Fire reaction class: EL (EN 13501-1)

Marking example of Alpert pipe 16*2.0

001M MULTILAYER PIPE Butt-welded TYPE I 16X2.0mm WRAS T=95°C P=10bar ISO 21003 CLASS 2/10bar, 5/10bar hh:mm:ss dd/mm/yy

Key	
001M	Progressive roll length
MULTILAYER PIPE	Trade name pipe
Butt-welded	Welding manner
TYPE I	Layer material indication
16X2.0mm	Size
WRAS	The pipes have been certified by WRAS
T=95°C	Maximum temperature for short periods
P=10bar	Maximum pressure
ISO 21003	Technical regulation
CLASS 2/10bar, 5/10bar	Application classes combined with operating pressure
hh:mm:ss dd/mm/yy	Time, date

Packaging

	12*1.6			15*2.0		16*2.0						
Type	**Box**	**Box**	**Box**	**Box**	**Box**	**Box**	**Box**	**Box**	**Box**	**Box**	**Box**	**Pallet**
Length of rolls	80	160	240	50	100	50	80	100	150	200	300	500
Size of packaging	48.5x12 x48.5	61x12 x61	56x20 x56	39x20 x39	52x20 x52	39x20 x39	45x20 x45	51x19 x51	60x19.5 x60	66x19 x66	85x20 x85	100x100x180 (9Rolls)

Regression curves of Alpert pipe

Example of reading

The maximum allowable pressure (Pmax) for a duration of 50 years at a certain temperature is identified by intersecting the line (vertical) relating to 50 years with the line (coloured) relating to the temperature.
Note the operating pressure provided for (Pes), the safety coefficient will be equal to ks=Pmax/Pes.

