



About Us

SOLIN S.A. is a Greek production company that produces composite and plastic pipes as well as fittings of a wide range of applications. It's one of the oldest companies of its kind and the only one with such a large range of pipe production for heating and sanitation. Primary and integral presupposition of its existence, since its establishment until today, is the quality of its products.

The well trained staff of the company consisting of 80 employees, works daily for covering the philosophy of the company that is "total customers satisfaction". The head office, the management and some warehouses are located in Athens, while the factory with the main warehouses are located in A' Industrial Area of Volos with buildings of 17.500m², in a total plot extent of about 33.000m².

In a course of more than 35 years of the manufacturing process and having the experience and knowledge of experts in this field, our products are among the top quality of their kind in the international markets and provide practical, reliable and enduring solutions to multiple applications.



More than 35
Active years



60%
Of our production
in exports



ISO certificate
since 2000

Exports to
40 countries
worldwide



Certifications from
international institutes



SOLIN S.A.
PRODUCTION OF PLASTIC PIPES

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AL-PERT-SOL®

**PERT/AL/PERT
COMPOSITE PIPES
OF ALUMINIUM-PLASTIC**

SUITABLE FOR APPLICATIONS



HEATING



SANITATION



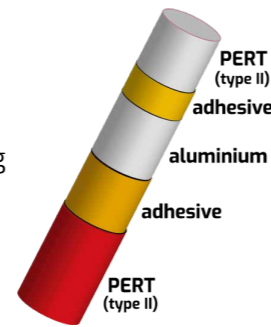
UNDERFLOOR
HEATING



COOLING

TECHNICAL INFORMATION

AL-PERT-SOL multilayer pipe is a 5 layer composite pipe: the inner and outer layers are made of Polyethylene Raised Temperature (PERT) (Type II) tightly bonded with melt adhesive to the mid layer of aluminium which is lengthwise welded in an overlapping way. By that way, a perfect oxygen barrier is succeeded that ensures their perfect unruptured connection.



AL-PERT-SOL pipes are produced according to the following international standards and specifications :

- DIN 16836:2005 / ASTM F1282:17 / SKZ HR 3.12 / EN ISO 21003:2008

PROPERTIES - PERT II	Units	Value
Tensile strength	MPa	20.6
Ultimate tensile	MPa	36
Hardness, Shore D		61.4
Flexural modulus	MPa	650
Ultimate elongation	%	760
Izod Impact	kJ/m ²	23.3
Thermal Conductivity at 20°C	W/(m*K)	0.43

MECHANICAL PROPERTIES OF ALUMINIUM

Alloy	Temper	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)
8006	0	100-140	<85	>25

CLASSIFICATION TABLE OF WORKING CONDITIONS

Application class	Design temperature TD °C	Time at TD years	Tmax °C	Time at Tmax years	Tmal °C	Time at Tmal hr	Typical field of application
1	60	49	80	1	95	100	Hot water supply (60°)
2	70	49	80	1	95	100	Hot water supply (70°)
4	20 +40 +60	2,5 +20 +25	70	2.5	100	100	Underfloor Heating and low temperature radiators
5	20 +60 +80	14 25 10	90	1	100	100	High temperature radiators

TD–design temperature *Tmax –maximum temperature *Tmal –malfunction temperature

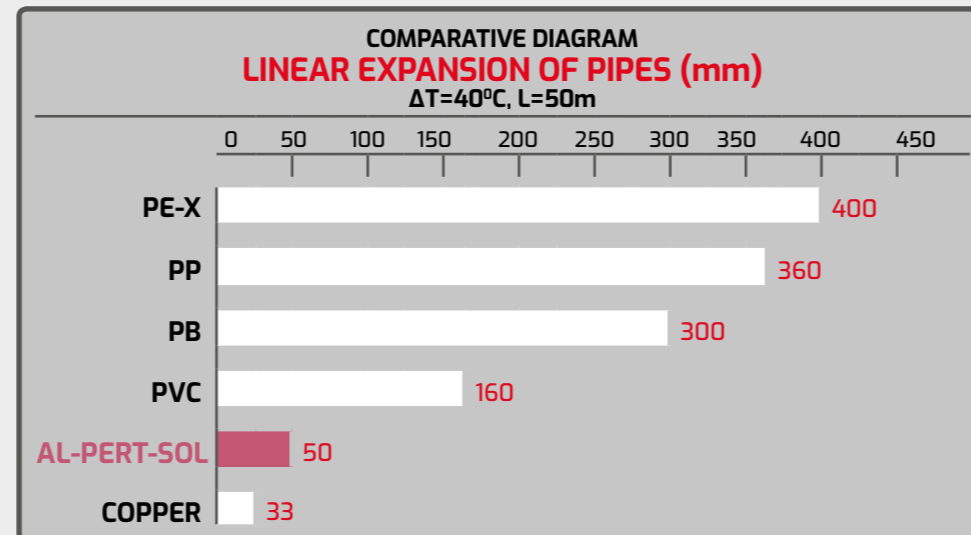
Note 1: For any of the above application class the times should be summarized.

Note 2: All systems which satisfy the conditions specified in the above table are also suitable for the transportation of cold water for a period of 50 years at a temperature of 20°C and a pressure of 10 bar. AL-PERT-SOL pipes, according to specification SKZ HR 3.12-2019, are applicable for classes 1, 2, 4 and 5 according to ISO 10508, for a design pressure of 4 or 6 bar.

Accompanied by the certification SKZ for their mechanical resistance and WRAS for their suitability in drinking water networks.



TECHNICAL INFORMATION



PERT CHEMICAL RESISTANCE CHART

Acetic acid 10%, CH ₃ COOH	A	Gasoline	C
Acetic acid 50%, CH ₃ COOH	A	Hydrochloric acid, 37%	A
Alcohol Methyl, CH ₃ OH	A	Kerosene	C
Ammonia, dry gas	A	Ketones	C
Aniline, C ₆ H ₅ NH ₂	C	Methyl Ethyl Ketone (MEK)	C
Barium Sulfate, BaSO ₄	A	Milk	A
Beer	A	Naphtha	C
Benzene, C ₆ H ₆	C	Nitric acid 10%-30%, HNO ₃	A
Benzoic acid, C ₅ H ₆ COOH	A	Nitric acid Conc, HNO ₃	C
Boric acid, H ₃ BO ₃	A	Phenols 100% (Carbolic acid), C ₆ H ₅ OH	B
Butane, CH ₃ (CH ₂) ₂ CH ₃	C	Potassium Hydroxide, KOH	C
Calcium carbonate, CaCO ₃	A	Sodium Chloride (Salt), NaCl	B
Calgon, (NaPO ₃) ₆	C	Sodium Hydroxide, NaOH	C
Carbon Monoxide, CO	A	Sulfur	B
Carbon Tetrachloride, CCl ₄	C	Sulfuric acid 50%, H ₂ SO ₄	A
Glucose, C ₆ H ₁₂ O ₆	A	Sulfuric acid 80-98%, H ₂ SO ₄	C
Diesel fuel	C	Toluene, CH ₃ C ₆ H ₅	C
Ethylene Glycol, HOCH ₂ *CH ₂ OH	B	Vinegar	A
Freon 22, CClF ₂	A	Urine	A
Fuel oil	C	Wines	A

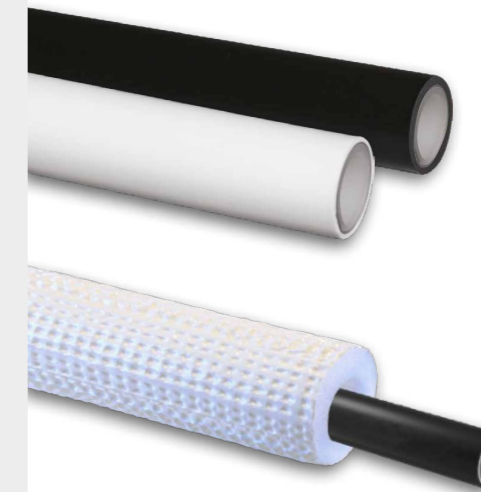
A=EXCELLENT, NO EFFECT
B=GOOD, MINOR EFFECT
C=NOT RECOMMENDED



GUARANTEE

Guaranteed for 10 years constant operation in cold and hot water systems under pressure. The guarantee covers product liability and possible damages to third installations up to 2.000.000€ per event and cumulatively on an annual basis.

AVAILABLE TYPES



SINGLE AL-PERT-SOL

Multilayer Composite pipe PERT/AL/PERT in dimensions Ø16-Ø32.

AL-PERT-THERM

With insulation of 9mm in dimensions Ø16-Ø26 and 15mm in dimension Ø32. It is made of expanded polyethylene with closed-cells, which is coated by a special moisture resistant film of white color, that offers UV protection.

INSTALLATION TIPS



STORAGE AND HANDLING

Before using AL-PERT-SOL pipes, they should be stored in their original packing under cover in order to prevent dust accumulation, long-term exposure to sunlight and avoid their damage.



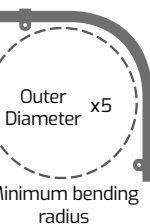
CUTTING

The cut of an AL-PERT-SOL pipe must be done perpendicular to the axis of the pipe by a special pipe cutter.



BENDING

Bending of AL-PERT-SOL pipe, can be done by hand alone or with the help of bending springs. These springs reduce the possibility of kinking the pipe while bending it. It is important not to kink the pipe, as this can damage the inner aluminium sleeve.



CONNECTION

AL-PERT-SOL pipes can be connected with press and screw fittings.



PRESSURE TESTING

After completing the installation, the circuits should be tested for fitting leakage. It is advisable to test with water with 1,5 times the working pressure for at least 24 hours.