



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



Of our production
in exports



ISO certificate
since 2000

Exports to
40 countries
worldwide



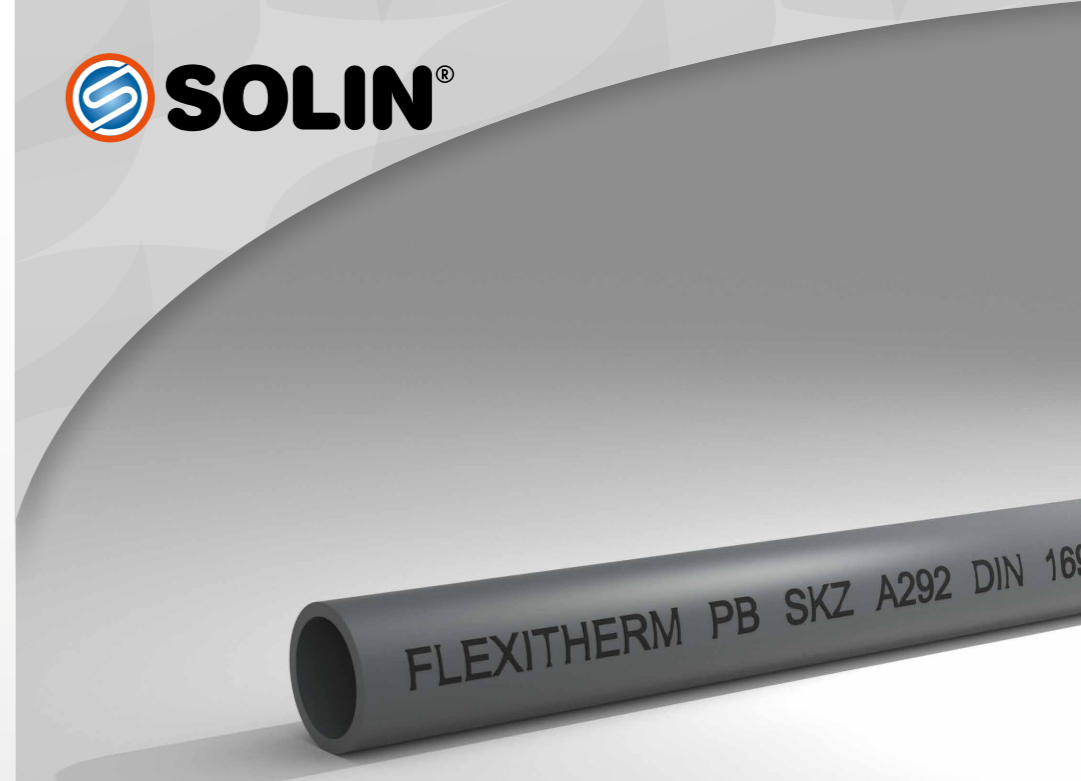
Certifications from
international institutes



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FLEXITHERM®

Pb-1
POLYBUTYLENE
PLASTIC PIPES

SUITABLE FOR APPLICATIONS



HEATING



SANITATION



COOLING



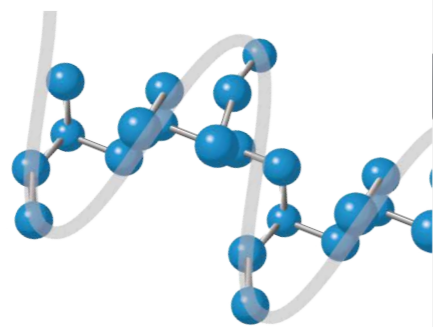
UNDERFLOOR

TECHNICAL INFORMATIONS

FLEXITHERM pipes are made from polybutylene (PB-1), the latest generation choice for piping systems. They are produced according to the following international standards and specifications:

- DIN 16968/16969
- EN ISO 15876
- B.S. 7291

They show **excellent resistance to mechanical stress** (pressure-temperature) compared to other types of pipes (a fact that leads to reduced pipe wall thickness for identical usage). That means that Pb pipes, in comparison to other types of pipes for the same external diameter, provide: lower weight and higher liquid volume transfer. They are also known as "**plumber's flexible friend**", because of their **exceptional flexibility** and the low memory effect, characteristics that offer improved and easy handlings.



LIFE DURATION							
OPERATION TIME (with SF 1,25)		50y	50y	50y	50y	25y	10y
TEMPERATURE		10°C	20°C	40°C	70°C	80°C	90°C
DIMENSION	8x1	33.4	31.2	26.4	17.4	14.5	11.3
	10x1,4	38.0	35.6	30.0	19.8	16.6	12.7
	10x1,5	41.2	38.6	32.6	21.5	18.0	13.6
	12x2	46.7	43.7	36.9	24.4	20.3	15.6
	15x1,7	29.8	27.9	23.6	15.6	13.0	10.2
	16x2	33.4	31.2	26.4	17.4	14.1	11.3
	18x2	29.2	27.3	23.1	15.2	12.7	10.2
	20x2	25.9	24.3	20.5	13.5	11.0	8.8
	20x2,8	38.0	35.6	30.0	19.8	15.9	12.7
	22x2,3	27.3	25.5	21.6	14.2	11.6	9.2
	25x2,3	23.7	22.1	18.7	12.3	10.2	8.1
	28x2,5	22.9	21.4	18.1	11.9	9.8	7.8

PRESSURE IN BAR

MECHANICAL PROPERTIES	Units	Value
Tensile strength	MPa	20
Elongation at break	%	300
Glass transition temperature	°C	-18
Tensile modulus of elasticity (20°C)	MPa	450

FLEXITHERM pipes are certified by SKZ institute for their mechanical resistance and by MPA for their oxygen barrier.



AVAILABLE TYPES

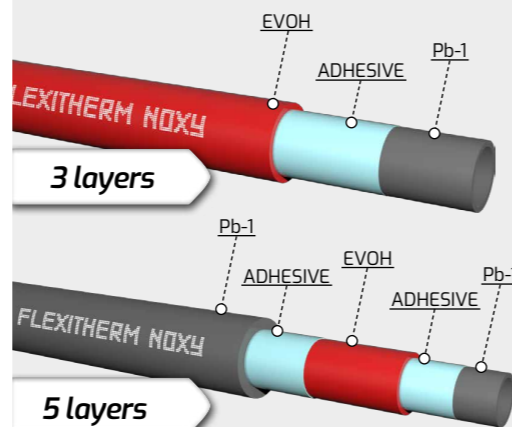
SINGLE FLEXITHERM

Polybutylene PB-1 pipes in sticks or coils.



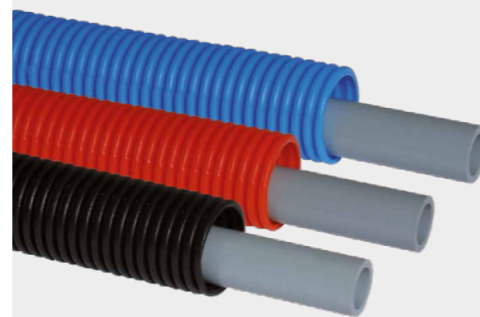
FLEXITHERM-NOXY

Polybutylene PB-1 pipes with oxygen barrier of three or five layers, suitable for heating. The oxygen barrier prevents the entrance of oxygen in the water circulation, so the corrosion of the metal parts of the system is avoided. The oxygen barrier is achieved by using a special material (EVOH), that either is: externally bonded (3 layers) or situated in the middle of the wall thickness (5 layers).



WITH PROTECTIVE SLEEVE

FLEXITHERM pipes can be available inside corrugated HDPE pipe that offers mechanical protection, easy replacement of the inner pipe in case of damage, reduction of the thermal losses and absorption of expansion capacity.



IN GENERAL:

Pb pipes remain straight after unminging

They have no thermal memory, so they have the tension to revert to the form that they had during crystallisation after an extreme condition e.g. frost.



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.

INSTALLATION TIPS



STORAGE AND HANDLING

Before using FLEXITHERM 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. Do not use pipe which has cuts, deep scratches or gouges, kinks or crushed sections, evidence of grease, oil or noticeable color fading of pipe. All damaged sections should be cut and replaced.



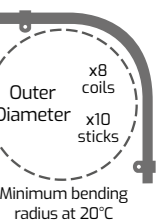
CUTTING

The cut of a FLEXITHERM pipe must be done perpendicular to the axis of the pipe by a special pipe cutter.



BENDING

Due to the pipe's inherent flexibility, it can be bent easily around the projections of the isolation plate in underfloor heating installation. Care not to kink or damage the pipe.



CONNECTION

FLEXITHERM pipes can be connected with press, screw, push fittings as well as with PB-1 fittings which can be connected with electro fusion.



THERMAL EXPANSION

The linear expansion rate of FLEXITHERM pipes is approximately 1,3mm/10°C temperature change for each meter of pipe. When installing long runs of pipes, allow 10-15mm in longitudinal clearance per meter of run to accommodate thermal expansion. Pipes must not be anchored rigidly or pulled tight between fixed points (i.e. manifolds-valves etc).



HEATING RADIATOR SYSTEM

In heating radiator system installations, FLEXITHERM pipes should always be installed within protective corrugated sleeve. Thus, we protect the inner pipe from possible damage, improve its performance and easily replace it when needed.



FROST

Due to their low thermal diffusivity it takes longer for water to freeze inside the pipes during cold weather. If freezing does occur, the pipe expands adapting to the increased volume of water (dilates without breaking). PB pipes resist frost damage and are unaffected by hard, soft or aggressive H2O condition.

*** In underfloor heating installations, oxygen barrier pipes are recommended.**