



# 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 company employs 80 well trained specialists who are working strongly for covering the philosophy of the company that is: Total customer's satisfaction. The head office is located in Athens, as well as the management and some areas of storage, while the factory with the main warehouses is located in A' Industrial Area of Volos with buildings of 17.500m<sup>2</sup>, in a total plot extent of about 33.000m<sup>2</sup>.

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



54%  
Of our production  
in exports



ISO certificate  
since 1992

Exports to more  
than 35 countries  
worldwide



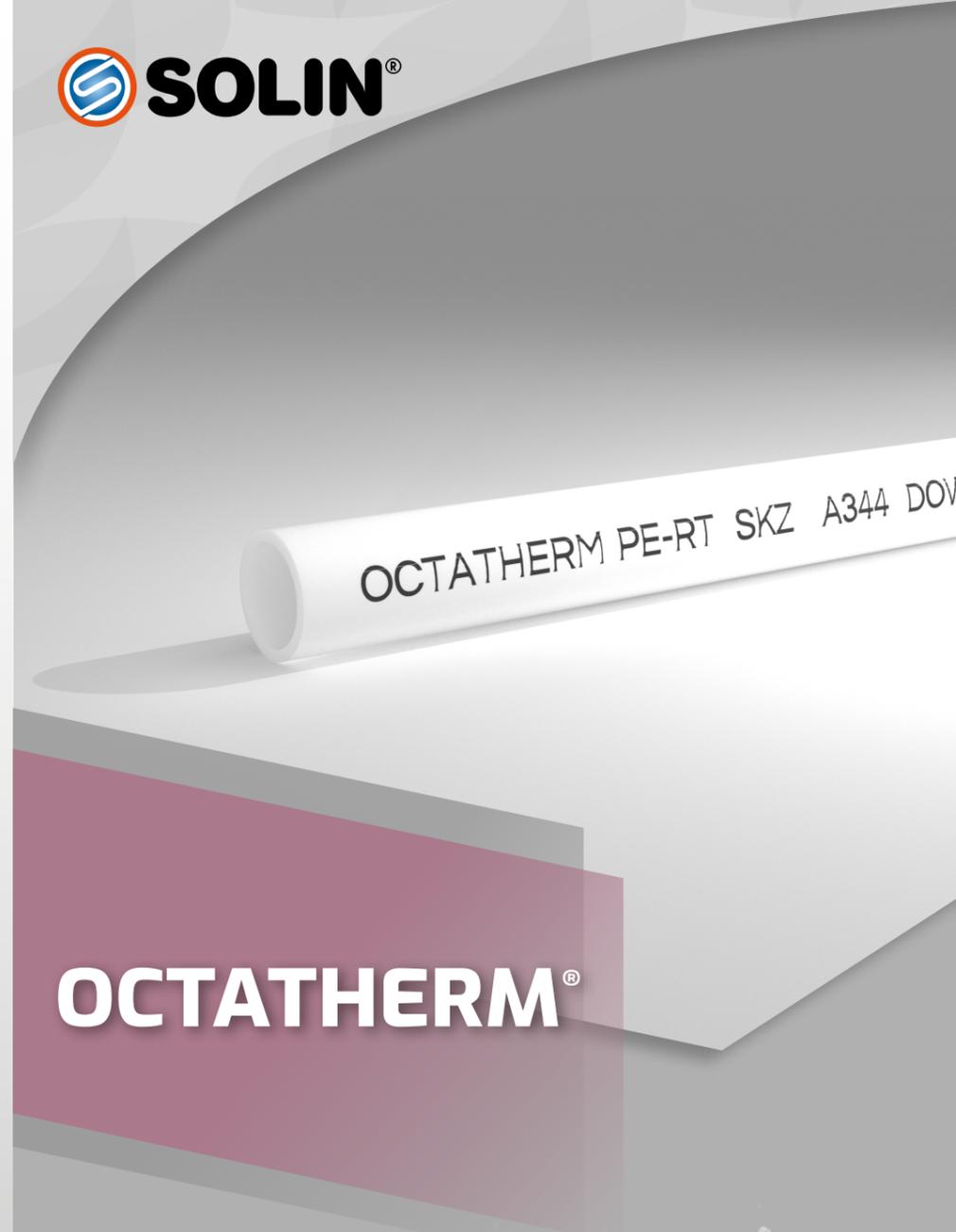
Certifications from  
international institutes



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# OCTATHERM<sup>®</sup>

**PE-RT**  
**POLYETHYLENE PIPES**  
**OF INCREASED TEMPERATURES**  
**RESISTANCE**

SUITABLE FOR APPLICATIONS



HEATING



SANITATION



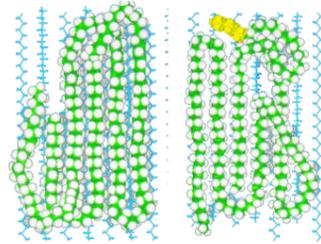
UNDERFLOOR  
HEATING



COOLING

## TECHNICAL INFORMATIONS

**OCTATHERM** pipes are made from polyethylene of raised temperature resistance (PE-RT) that have unique molecular structure and crystalline micro-structure, which provides excellent long term hydrostatic strength at high temperatures without the need of material's cross-linking. The lamellar crystal structures are connected through amorphous polymer segments: **the tie chains**.



This could be described as a kind of geometrical cross-linking". Tie chains show **extensibility** and **mobility** and can **absorb and dissipate energy**. OCTATHERM pipes are produced according to the following international standards and specifications:

- DIN 16833/16834
- DIN 4721- 4726 (for pipes with oxygen barrier)
- ISO 22391

The outstanding flexibility and superior smoothness of the inner and outer surface of OCTATHERM pipes allow the economical, safe and qualitative installation with no incrustations and low pressure loss. They are ideal for underfloor heating installations where the very close bends are required.

### LIFE DURATION

OPERATION TIME (with SF 1,25)	TEMPERATURE	50y	50y	50y	50y	25y	10y
		10°C	20°C	40°C	70°C	80°C	90°C
DIMENSION	15x2,5	29.0	26.7	22.1	13.0	10.1	8.3
	16x2	20.1	18.6	15.4	9.3	7.3	6.0
	17x2	19.3	17.8	14.7	8.7	6.8	5.6
	18x2	18.1	16.7	13.8	8.1	6.3	5.2
	18x2,5	22.7	20.9	17.3	10.5	8.2	6.7
	20x2	15.8	14.5	12.0	7.3	5.7	4.6
	20x2,8	22.7	20.9	17.3	10.6	8.3	6.8
	22x3	22.7	20.9	17.3	10.3	8.0	6.6
	25x2,3	14.5	13.4	11.1	6.6	5.2	4.2
	25x3,5	22.7	20.9	17.3	10.6	8.3	6.8
28x3	17.3	15.9	13.2	7.8	6.1	5.0	
32x3	14.5	13.4	11.1	6.8	5.3	4.3	

PRESSURE IN BAR

### MECHANICAL PROPERTIES

	Units	Value
Tensile strength	MPa	16.5
Elongation at break	%	300
Flexural modulus	MPa	550
Hardness, Shore D		53

OCTATHERM pipes are certified by SKZ institute for their mechanical properties and by MPA for their oxygen barrier.



## AVAILABLE TYPES

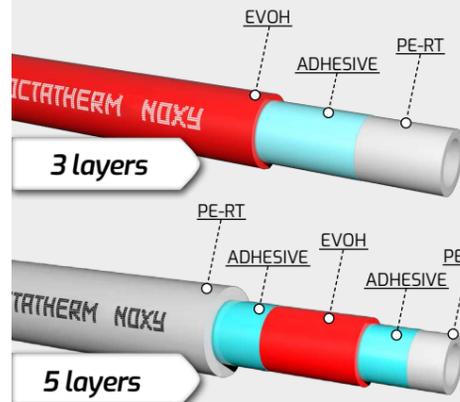
### SINGLE OCTATHERM

Polyethylene PE-RT (DOWLEX 2344E) pipes



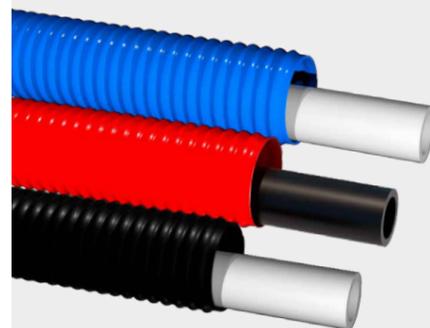
### OCTATHERM-NOXY

Polyethylene PE-RT (DOWLEX 2344E) pipes with oxygen barrier of three or five layers 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

The OCTATHERM pipe is available inside corrugated HOPE 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.



### OCTATHERM-ISO

OCTATHERM pipes are also available with insulation ISOLIN of 9 or 15mm. This insulation is made of expanded closed-cell polyethylene, which is coated by a special moisture resistant film of white color, that offers UV protection. It is recommended for outdoor use, due to its high resistance to solar radiation and adverse weather conditions and also in every application that requires protection of heat loss or concentrates.



OCTATHERM pipes can be produced in any colour, according to customer's requirements.



### GUARANTEE

Guaranteed for 10 years constant operation in cold and hot water. 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 OCTATHERM 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



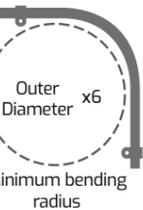
### CUTTING

In order to cut OCTATHERM pipe, a special pipe cutter should be used and the cut must be done perpendicular to the axe of the pipe.



### BENDING

In order to achieve hot bending of OCTATHERM pipe, it can be either heated by a hot air gun with diffuser nozzle of controlled temperature, or by hot water circulating inside the pipe. **Attention: the use of the open flame is forbidden.** Care not to kink or damage the pipe. The maximum bend radius at 20°C should be 6 times the nominal outer diameter of the pipe.



### CONNECTION

RETIFLEX pipes can be connected with screw, press, and push 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.



### THERMAL EXPANSION

The linear expansion rate of OCTATHERM pipes is approximately 19,5mm/10°C temperature change for each 10m of pipe. When installing long runs of pipes, allow 15-20mm 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, OCTATHERM pipes should be always installed within protective corrugated sleeve. Thus, we protect the inner OCTATHERM pipe from possible damage, improve its performance and provide its easy replacement in case of damage. **The "closed curves" should be avoided.** In heating installations between two fixed points (manifold-valve) a **snake-shaped** route must be followed, i.e. an open curved "S" before each fixed point.

**\*In underfloor heat installations the pipes must have oxygen barrier.**

**\*Antifreeze substances must be used for applications below 0°C.**