



Aleternum®

## **Extruded Radiators with Anticorrosion Treatment**

Aleternum®

# Aleternum® : Anticorrosion T

## Introduction



**Aleternum®** inner coating by **Fondital**

Corrosion is the primary cause of malfunctions in heating systems. Not only does it deteriorate the components of the system, but over the years corrosion significantly reduces efficiency, increasing consumption and, as a result, operating costs.

For example, corrosion in a heating system containing cast iron or steel radiators produces a sludge that accumulates at the bottom of the radiators, obstructing the radiators themselves and the pipes, resulting in a partial or total loss in thermal performance and uneven heat distribution. In conventional aluminium radiators, corrosion produces gas pockets which prevent the radiator from heating evenly and may limit thermal performance.

To stop corrosion even before it starts, Fondital has developed Aleternum®, an exclusive resin-based internal coating to protect the radiator water chamber.

Aleternum® by Fondital brings the heating system into a new era, in which total protection is a guarantee of safety and high efficiency.

Your heating system will always be as good as new!

# Treatment for Radiators

## What is corrosion?

✓ It is the chemical and physical interaction between a metal and a water-based medium, which causes changes in the properties of the metal and which often leads to a loss in the functionality of the metal itself, of the medium or of the system consisting of these two elements.



## Metal + Water + Oxidizing Agent = Corrosion

The different forms of corrosion are defined according to the area of the metal affected by corrosion as follows:

- ✓ **general corrosion (or widespread corrosion):** when the entire surface area of the material is affected by corrosion;
- ✓ **uniform corrosion:** when corrosion affects the entire surface area of the material and causes the same degree of damage all over the surface;
- ✓ **localised corrosion:** corrosion affects only certain areas of the material; the area affected by corrosion may present different morphologies, such as pits, craters, cavities, pinholes, cracks, etc.

plan view			side view
	Uniform Corrosion – general attack		
	Uniform Corrosion – uniform attack		
	Localised Corrosion		
	Pitting	craters	
		pinholes	
		cavities	
	Stress Corrosion Cracking (SCC)	Simple cracks	
		Branching cracks	
	Erosion corrosion		



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**TREATMENT**



# Maior Aleternum® Advantages

## 1] TOTAL ANTICORROSION TREATMENT

## 2] IDEAL FOR A WIDE RANGE OF PH VALUES

Conventional aluminium radiators require a pH value between 7 and 8.

Our new treatment eliminates this limit, meaning that Aleternum radiators can operate with a wider pH range than non-treated aluminium and steel radiators (attack occurs at pH values below 8).

**Aleternum®** by **Fondital** can be used in systems with high pH values with total peace of mind.

Conventional Aluminium Radiator



Radiator with Aleternum treatment



## 3] NO FORMATION OF HYDROGEN POCKETS (NO GAS)

## 4] CHLORIDE-RESISTANT

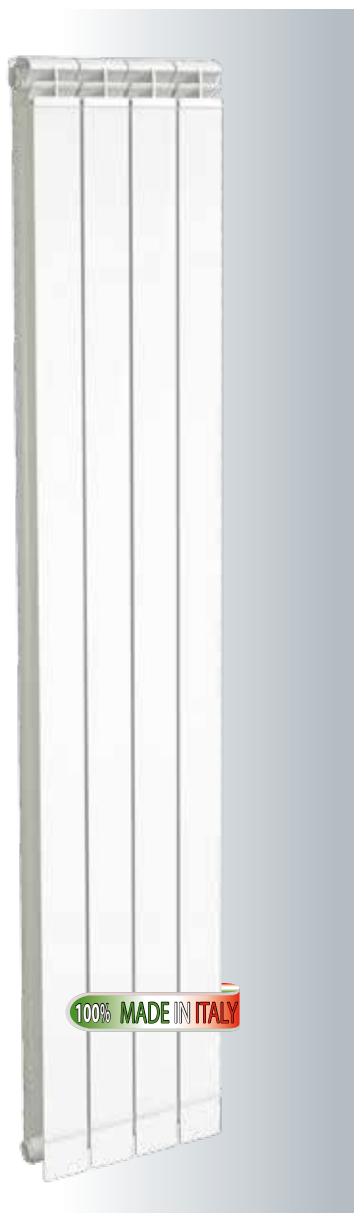
## 5] PREVENTS OBSTRUCTIONS AND RESULTING COLD SPOTS

## 6] LIGHT WEIGHT AND EASY TO INSTALL

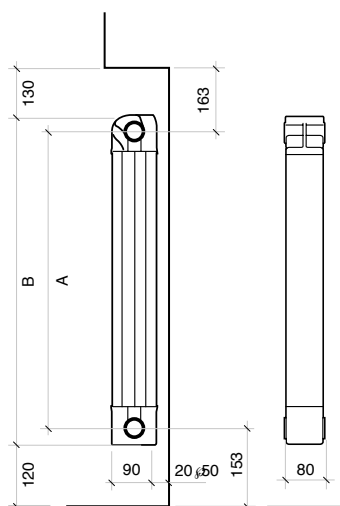
## 7] CAN BE INSTALLED IN MIXED-METAL HEATING SYSTEMS

## 8] 20-YEAR WARRANTY

## 9] PATENT PENDING TECHNOLOGY



Designed for contemporary living spaces, Maior S/90 offers smart and flexible solutions. Vertical design is the key to making the most of limited space. Available in seven models, it will fit perfectly in any home interior.



## Technical specifications

Model	Depth	Height	Centre distance	Length	Connection diameters	Water capacity	Weight	Heat output $\Delta T$ 50K	Exponent	Coefficient
	mm	(B) mm	(A) mm	mm	inches	litres/sect.	Kg/sect.	W/sect.	n	$K_m$
900	90	966	900	80	G1	0.43	1.96	182	1.3605	0.8886
1000	90	1066	1000	80	G1	0.47	2.20	195	1.3630	0.9426
1200	90	1266	1200	80	G1	0.55	2.50	223	1.3610	1.0864
1400	90	1466	1400	80	G1	0.62	2.80	250	1.3600	1.2227
1600	90	1666	1600	80	G1	0.70	3.00	275	1.3843	1.2260
1800	90	1866	1800	80	G1	0.78	3.40	300	1.3570	1.4846
2000	90	2066	2000	80	G1	0.86	3.80	324	1.3905	1.4083

**Maximum working pressure: 1600 kPa (16 bar).**

Characteristic equation of model  $\Phi = K_m \Delta T^n$ .

The thermal efficiency values shown comply with the European Standard EN 442-1:2014 and are certified by the MRT Lab of the Milan Polytechnic, notified body no. 1695.

**COLOUR:** RAL 9010 White.

**STANDARD SUPPLY:** Blocks of 3, 4, 5, 6 sections. The water diaphragm is included.

Maior S/90: extruded aluminium radiator

