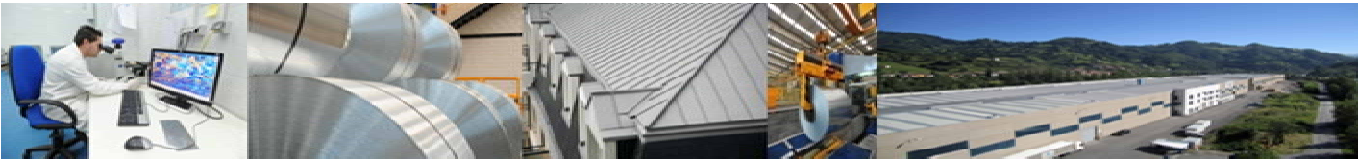




## TECHNICAL DATA SHEET: elZinc®



Asturiana de Laminados S.A supplies coils and sheets made of the highest quality Titanium Zinc in the international market under the name of elZinc®.

elZinc® titanium zinc meets all the requirements of the European standard EN 988, which defines the general requirements for titanium zinc strips and sheets for use in the building industry.

The alloying components are high-grade refined zinc of **the highest level of purity Zn (>99.995%)** according to the **European standard EN 1179**, with precisely defined additions of copper and titanium.

elZinc® titanium zinc has been optimised for use in building applications. Prerequisites for this are the rolling process, which is precisely tailored to the elZinc® alloy, and accurate temperature control during manufacture.

This means the achievement of consistent **quality and of compliance with all properties.**

elZinc® titanium zinc stands out due to

- Very good workability irrespective of the direction of rolling.
- High creep strength (creep strain limit).
- Low cold brittleness.
- High recrystallisation threshold, i.e. no grain growth until 300 °C; this is crucial for soldering.

elZinc® undergoes thorough internal and external quality examinations that ensure excellent properties, thus **exceeding the requirements established by standard EN 988.**



Test criteria for elZinc's standard rolled zinc is more demanding than EN 988 as it's shown in the following table:

CHEMICAL COMPOSITION		
Product Requirements	elZinc titanium zinc	EN 988 Standard
Zinc	Zn 99,995 (Z1 as per EN 1179)	Zn 99,995 (Z1 as per EN 1179)
Copper	0.08 - 0.2%	0.08 - 1.0%
Titanium	0.07 - 0.12%	0.06 - 0.2%
Aluminium	≤ 0.015%	≤ 0.015%
DIMENSIONS		
Product Requirements	elZinc titanium zinc	EN 988 Standard
Thickness of sheets/coils	± 0.02 mm	± 0.03 mm
Width of sheets/coils	+1/-0 mm	+ 2 / -0 mm
Length of sheets	+ 2 / -0 mm	+ 10 / -0 mm
Straightness	≤ 1,0 mm/m	≤ 1,5 mm/m
Flatness	≤ 2mm	≤ 2 mm
MECHANICAL AND TECHNICAL PROPERTIES		
Product Requirements	elZinc titanium zinc	EN 988 Standard
Yield strength elasticity (Rp 0,2)	> 110 N/mm <sup>2</sup>	≥ 100 N/mm <sup>2</sup>
Tensile strength (Rm)	> 150 N/mm <sup>2</sup>	≥ 150 N/mm <sup>2</sup>
Breaking elongation (A50)	≥ 40 %	≥ 35%
Vickers hardness (HV3)	≥ 45	-
Folding test	No cracks at the edge of fold	No cracks at the edge of fold
Bending back after folding test	No cracks	-
Erichsen test	min. 7,5 mm	-
Remaining stretch in creeping behaviour test (Rp0,1)	≤ 0,1%	≤ 0,1%

Whether natural or pre-weathered, zinc is a material **highly valued by architects and professional roofers**. It allows great freedom in terms of aesthetics and architecture, and it adapts to each construction style, whether involving classic or modern architecture.



### HANDLING

ElZinc products should be handled with special care when loading and unloading to prevent any damages by bumps or scratches.

### STORAGE:

elZinc® should be stored in dry and ventilated places, preventing condensation and protecting it from moisture.

### NATURAL WEATHERING PROCESS

After exposure to weathering, **elZinc® titanium zinc forms a natural patina coating that protects it and provides it with an exceptional resistance against corrosion**, in fact this layer will avoid the access of oxygen to the metal surface, while giving it its final colour (gray).

The presence of carbon dioxide (CO<sub>2</sub>) and ventilation are necessary for the creation of patina. It is also extremely important to avoid permanent accumulation of water on the metal surface. Otherwise, the zinc oxide layer cannot be formed in zinc hydroxycarbonate patina and will not protect the zinc. Therefore it is basic to control the possible condensation formed on the underside of a zinc roof with a correct installation.