



VMZINC Attributes

Zinc is among the most sustainable metals used in construction today and has been used on the roofs of Paris for almost 200 years.

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Density	7.18 t/m3
Thermal expansion coefficient (parallel to the rolling direction)	0.022 mm/m/°C
Melting Point	420°C
Recrystallization point	300°C
Heat conductivity	110 W/(mK)
Electrical conductivity	17 MS/m
Danger of sparking	Non-sparking
Magnetic properties	Diamagnetic

Weights of Different Zinc Thicknesses

Thickness (MM)	Weight (kg/m2)
0.7	5.026
0.8	5.744
1.0	7.180
1.5	10.770

All weights are calculated using a density of 7.18t/m3 or 1mm = 7.18 kg/m2

Zinc

Alloy Composition (to EN 988)	
To EN 1179 (with SHG 99.9995% purity)	

Other elements making up the alloy are:

Copper	0.08 – 1.0%
Titanium	0.06 – 0.2%
Aluminium	≤ 0.015%



Thickness	±0.03mm
Width	0 to +2mm
Length	0 to +10mm
Flatness of Sheet	≤ 2mm (See additional omega rule below)

Omega rule for acceptable flatness of VMZINC sheets

The omega (ω) rule is expressed as: ω = 100 x h/l

where: ω = < 0.6

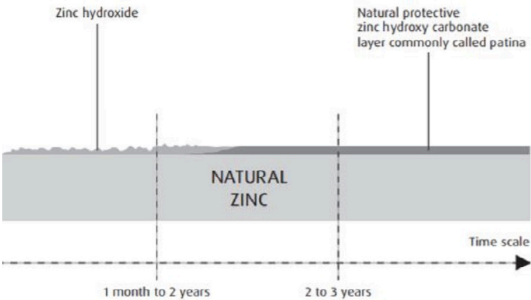
wave height is h = 2mm maximum

wave length is l (in mm)

Mechanical Properties (to EN 988)	
0.2% proof strength, non-proportional extension	≥ 100 N/mm²
Tensile strength	≥ 150 N/mm²
Percentage total elongation at fracture	≥ 35%
Bending test at 20°C	No cracks
Refolding after bending at 20°C	No cracks

Formation of the natural patina

Zinc reacts with water to form zinc hydroxide; this then reacts with Co2 to form the stable compound zinc hydroxy carbonate. When zinc is exposed to too much water and not enough Co2 the stable grey patina will not form leaving the unstable zinc hydroxide which is commonly referred to as white rust. The amount of time required for formation of the patina from Natural zinc will depend on the exposure of the zinc to water. a low slope roof may only require 3 years whereas a protected soffit may require over 10 years exposure.



Surface Finishes



Environmental Product Declarations (EPD)



 [Horizontal gradient line](#)

Zinc, the Sustainable Solution

- [Characteristics of Zinc](#)
- [Life cycle](#)
- [VMZINC & LEED®](#)
- [VMZINC & HQE®](#)
- [Benefits of VMZINC](#)
- [Sustainable Building Benchmark](#)
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