

AZENGAR®

Technical data sheet

AZENGAR® is a VMZINC® brand, consisting of a titanium zinc alloy, engraved and surface treated.

AZENGAR® has been developed using an eco-design approach at every stage in the design and industrialization process, making it possible to reduce fluids consumption.

AZENGAR® surface layer does not contain substances or chemicals of concerns, according to the EU regulation (EC N°1272/2008).

AZENGAR® is, like the other VMZINC® surface aspects, fully recyclable.

AZENGAR® is a malleable material ideally adapted for buildings where long-lasting cladding and roofing is required.

AZENGAR® has a build in capacity to protect itself against corrosion, once: the material is installed. In a chemical reaction, humidity and CO₂ form a natural protective light-grey patina layer on the surface in, which is insoluble in water and very durable.

The alloy consists of pure Zinc (99,99%), which corresponds to the Z1 classification in the European Standard EN 1179, alloyed with small quantities of titanium and copper. The alloy is commonly named "TITANIUM ZINC".

The metal is rolled at a constant thickness and dimensional tolerances in conformity which the European standard EN 988 « Zinc and zinc alloys - Specification for rolled flat products for building ».

VM BUILDING SOLUTIONS has set up a more strict benchmark than the EN988 norm, with reference to the VMZINC® PREMIUMZINC® label. The PREMIUMZINC® quality label, was developed and has been enforced by VMZINC® since 2002.

This label demands stricter specification for some measurements, particularly flatness and chemical.

European EN 988 and PREMIUMZINC® quality requirements are met as shown in the following table:

Controlled characteristics	PREMIUMZINC standard	EN 988 Standard
Chemical composition		
Zinc	Z1	Z1
Copper	0,11-0,17%	0.8-1.0%
Titanium	0,06-0,11%	0,06-0,2%
Aluminium	≤0,015%	≤ 0.015%
Dimensional characteristics (tolerances)		
Thickness	±0,03 mm	± 0.03 mm
Width	+2 / 0 mm	+ 2 / -0 mm
Length	+5 / 0 mm	+ 10 / -0 mm
Curvature	≤1,5 mm/m	≤ 1.5 mm/m
Flatness	≤2 mm and $\omega < 0,6$	≤ 2 mm
Mechanical characteristics (in the direction of rolling):		
0.2 % yield strength	120-150 N/mm ²	≥ 100 N/mm
Tensile strength	≥150 N/mm ²	≥ 150 N/mm
Breaking elongation	≥35%	≥ 35%
Bending test (at 180°C)	No cracking at fold	No cracking at fold
De-bending after bending	No cracking at fold	No cracking at fold
Creep resistance (during one hour under a load of 50 N/mm ²)	≤ 0.08%	≤ 0.1%
Bending at 4°C	No cracking	-
Stamping (test according to Erichsen)	7 mm without cracking	-
Vickers hardness	≥ 45	-

AZENGAR® ASPECT:

AZENGAR® surface aspect is resulting from a unique surface treatment process which transform both roughness and color of natural zinc with the following characteristics:

- Engraved surface aspect
- Roughness (according to ISO 25178):
 - Sa > 3 µm
 - Sz > 25 µm
- Shade:
 - L > 78 before natural patination
- Glossiness:
 - < 15 GU

GENERAL RECOMMENDATIONS:

Specification:

When choosing a VMZINC® product, including for surface aspects, a combination of several factors must be taken into account (geographic location, shape and exposure of the building, climate, local regulations).

It is recommended that VMZINC® products are installed by building professionals (architects, design teams, specialised companies) or other specialists who has the know how to work with zinc and to incorporate the best solutions to each individual situation and if necessary, consulted the relevant VMZINC® departments before installation.

This information is supplied in good faith based on our current knowledge. Products, and recommendations for their use, may be changed at any time based on observations arising from our experience and on evolving technologies.

Responsibility:

The specification and installation of VMZINC® products or systems, as well as complete constructive systems for a building site, are the sole responsibility of the architects and building professionals, who must ensure these products are used in a way that is appropriate to the end purpose of the construction, and that they are compatible with other products and techniques used.

The specification and installation of the products imply complying with the standards in force and the manufacturer's recommendations.

VM BUILDING SOLUTIONS cannot be held responsible for any damage resulting from a specification or installation that does not comply with local building regulations, best practices and does not comply with VM BUILDING SOLUTIONS specifications and recommendations.

**Department Head Quality
VM BUILDING SOLUTIONS**



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