

# VMZ Composite

Composite zinc panels for ventilated cladding and curtain walls.

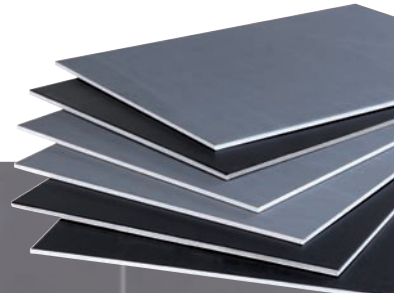
## Advantages

The elegance  
of zinc

Exceptionally  
flat and rigid

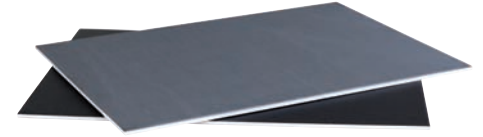
Large dimension  
of panels and  
dimensional  
stability

Suitable for  
curved surfaces  
and filling  
curtain walls



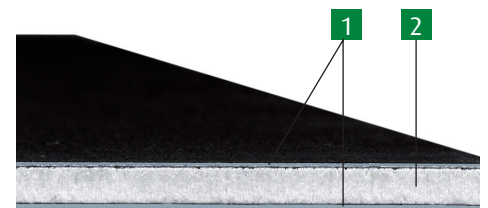
# VMZ Composite, a noble, natural panel for architectural creativity

The history of VMZINC® goes back to the first half of the 19th century. Down through the years, this history reflects the image of a noble, natural material that is exceptionally durable. Products are manufactured using high quality Z1 zinc (99.995 % pure zinc) as defined by standard EN 1179, with an addition of titanium, copper and aluminium.



**VMZ Composite** VMZ Composite is perfectly flat and rigid and combines the characteristics of zinc – unique elegance and unrivalled durability – with the architectural possibilities offered by large, exceptionally flat panels.

VMZ Composite is a multilayered panel made up of two sheets of zinc that are 0.5 mm thick and thermo-glued to either side of a mineral-rich polyethylene core for optimum reaction to fire. It is manufactured using tested Alcoa Architecture Products technology.



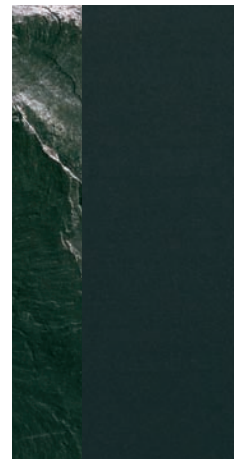
- 1 0.5 mm zinc sheets
- 2 Polyethylene layer

**Surface aspects** QUARTZ-ZINC® and ANTHRA-ZINC® preweathered products are manufactured treating the surface of natural zinc so as to artificially produce a patina equivalent to the natural self-protective coating that forms on zinc over time. As with all patina, this modification of the crystalline structure of the metal evolves over time, demonstrating the fact that zinc is a living material.

QUARTZ-ZINC®



ANTHRA-ZINC®



**Technical data** Exclusive large dimensions

Maximum width	1,000 mm *
Standard length	2,000 mm - 3,000 mm - 4,000 mm
Lengths to order	up to 6,000 mm

\* 1.250 mm on request solely in QUARTZ-ZINC® in 0.7 mm thickness.

## Characteristics of panels

Surface aspects	Preweathered QUARTZ-ZINC® and ANTHRA-ZINC®
Thickness of zinc	0.5 mm
Inner layer	mineral-rich polyethylene (FR)*
Overall thickness	4 mm
Moment of inertia	0.39 cm <sup>4</sup> /m
Density of composite	12 kg/m <sup>2</sup>
Expansion coefficient	2.2 mm per 100°C

\* Fire Retardancy

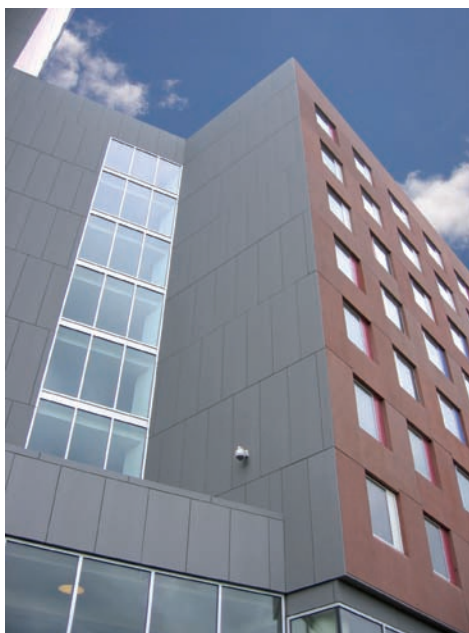
# Infinite possibilities for architectural creativity

## Numerous applications

VMZ Composite has numerous exterior and interior applications. It can be used for high quality facades, filling curtain walls and cladding balconies.

VMZ Composite adapts to the shape of a building like a second skin. Used on curved facades, to clad columns, rotundas...

VMZ Composite can be formed and bent easily to give shape to all projects, while remaining flat and stable.





## A product for sustainable building

VMZINC® products offer a varied range of systems, aspects and colours for customising buildings. VMZ Composite panels ensure that buildings blend harmoniously into their environment and thus contribute to the environmental performance of buildings.

## Certification

VMZINC is one of the first zinc manufacturers to have obtained ISO 14001 certification, which describes the stages necessary for maintaining and improving an integrated environmental management system. VMZINC is also actively committed to developing solutions that can be used in HQE® buildings (Haute Qualité Environnementale = High Environmental Quality).



## Recycling

VMZ Composite is part of our environmental approach and is entirely recyclable, both the core and the zinc skin can be re-melted and used to manufacture new products.

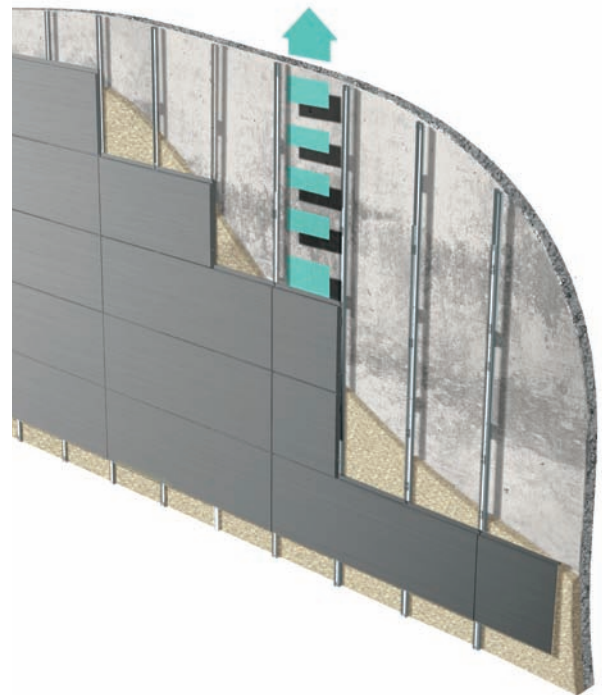
## Easy to maintain

The self-protective coating that forms naturally on the zinc's surface when the panels come into contact with the atmosphere make them extremely durable. Thanks to this coating, VMZINC products require no particular maintenance. The durability and longevity of VMZ Composite thus contribute to reducing requirements for new materials during the lifespan of a building.

## A system dedicated to ventilated facades

Buildings are subjected to a multitude of constraints: thermal, hygrometry, atmospheric agents... and the materials used for facades play an important role in protecting buildings. VMZ Composite is cost-effective and is used in ventilated facades offering a healthy, lasting environment for buildings.

The intermediary air space between the wall and the VMZ Composite, combined with a layer of insulation applied to the walls, improves the thermal efficiency of the building considerably. It allows natural ventilation that eliminates heat, humidity and infiltrations.



# Three options for optimum installation on ventilated facades

There are other installation systems possible. Please contact the VMZINC teams.

VMZ Composite can be installed:

- In panels fixed with rivets or screws
- In vertical cassettes
- In horizontal cassettes.

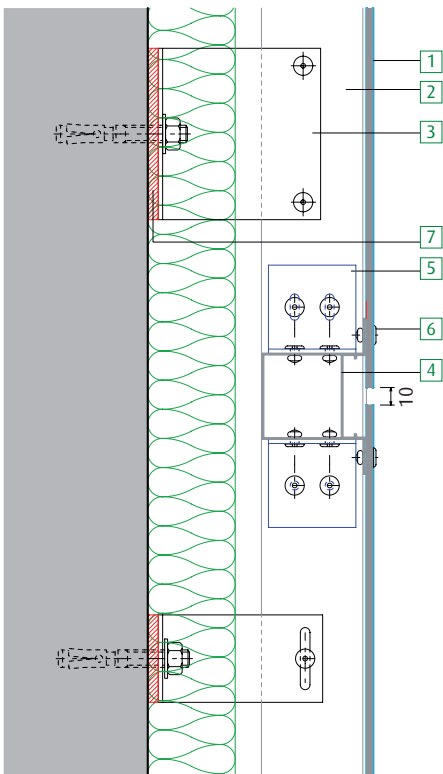
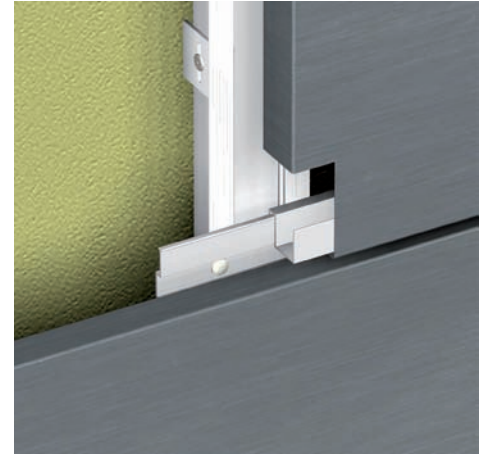
## Panels fixed with rivets or screws



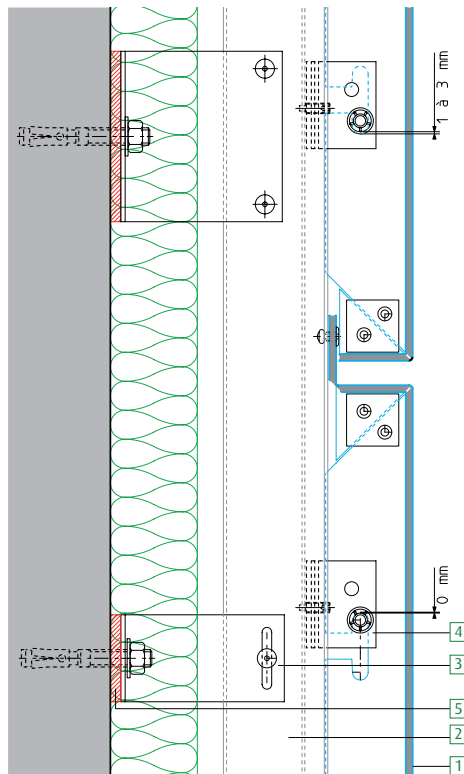
## Cassette systems Vertical cassettes



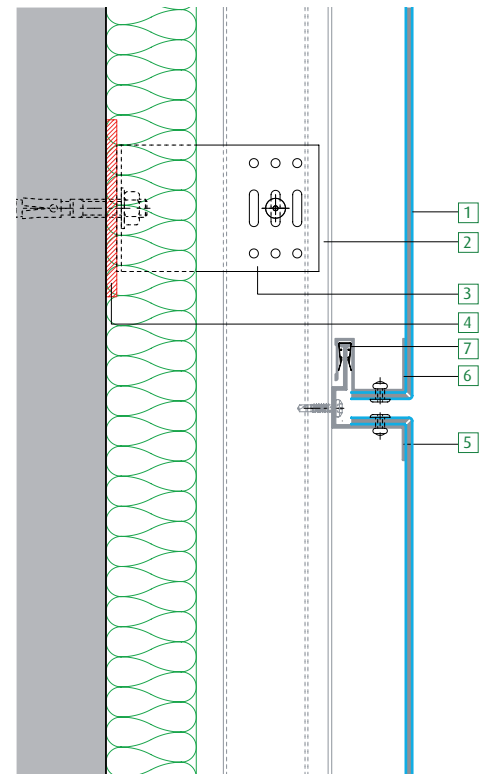
## Cassette systems Horizontal cassettes



- 1 VMZ Composite panel
- 2 Vertical secondary substructure aluminium rail
- 3 Bracket or fixing bracket
- 4 Horizontal aluminium rail
- 5 Aluminium bracket 50 x 50 mm
- 6 Rivet or screw
- 7 Spacer to break thermal continuity



- 1 Vertical VMZ Composite cassette
- 2 Vertical secondary substructure aluminium rail
- 3 Bracket or fixing bracket
- 4 Slider
- 5 Spacer to break thermal continuity



- 1 Horizontal VMZ Composite cassette
- 2 Rail d'ossature secondaire vertical en aluminium
- 3 Bracket or fixing bracket
- 4 Spacer to break thermal continuity
- 5 Top fixing rail
- 6 Bottom fixing rail
- 7 Anti-vibration spacer



### **Subject**

This document is intended for specifiers (building project architects and design teams)

and users (companies responsible for installation on the building site) of the designated product or system.

Its purpose is to provide the main information, text and diagrams, relating to specification and installation (including supporting structures) and flashing installation.

Any use or specification outside the area of use and/or specifications contained in this manual requires specific consultation with the Umicore technical departments.

This does not commit the latter to any responsibility with regard to the feasibility of the design or implementation of these projects.

### **Countries of application**

This document applies exclusively to the specification and installation of the designated products or systems on building sites in United Kingdom and the Republic of Ireland.

### **Qualifications and reference documents**

Please note that the specification of all construction systems for a given building remains the exclusive responsibility of its design team, who must, in particular, ensure that the specified products are suitable for the purpose of the building and compatible with the other products and techniques used.

Please note that the correct use of this manual requires knowledge of VMZINC® materials and of the zincroofing profession.

While construction is underway all standards in force must be respected.

Furthermore, Umicore offers training courses specifically for professionals.

### **Responsibility**

The specification and installation of VMZINC® products manufactured by Umicore are the sole responsibility of the architects and building professionals who must ensure these products are used in a way suited 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 implies respecting the standards in force and the manufacturer's recommendations. In this regard, Umicore publishes and regularly updates specification and installation manuals for specific geographic areas and provides training courses. All the information on the latter can be obtained from the local VMZINC team.

Unless otherwise agreed in writing, Umicore cannot be held responsible for any damages resulting from a specification or installation that does not respect all of Umicore's specifications and the above standards and practices.

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