

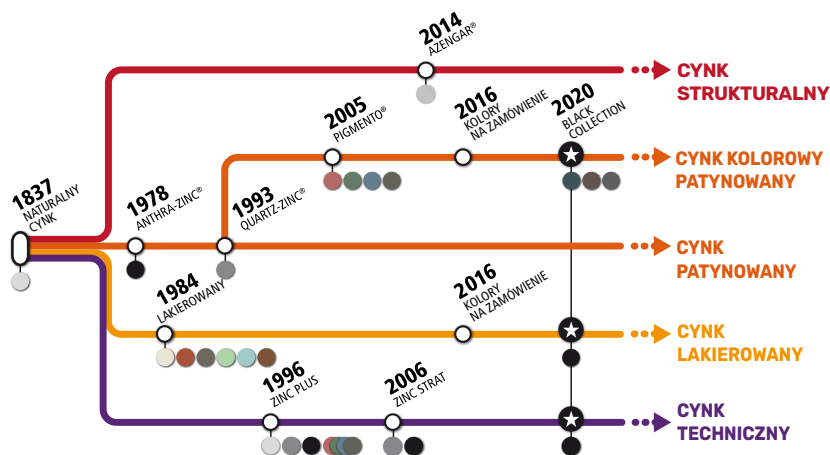
VMZINC

Surface finishes



Unique diversity of surface finishes

VMZINC offers a variety of surface aspects which blend with wood, brick, cement, glass, stone and other materials in complete harmony. This warm, luminous, highly expressive material responds freely to the play of light, its colours shifting to reflect the changing hues of the sky. Zinc is a noble, natural material which is one of the most durable materials in the building industry thanks to its low energy consumption during production and its recycling capacity. There are many examples of roofs in Europe that are more than 100 years old (notably the Parisian roofs). Zinc is very malleable, self-protecting thanks to its patina and requires no particular maintenance.



A pioneer in surface aspect treatments, VMZINC® is still putting its know-how at the service of a colour offer compliant with the European EN 988 standard. VMZINC® is produced from an alloy that essentially contains high quality zinc as per the EN1179 standard and small quantities of copper and titanium. The copper hardens the alloy and increases its mechanical strength. The titanium limits its deformation. It is compliant with the European EN 988 standard and the PREMIUMZINC quality label which exceeds the standard's requirements.

NATURAL ZINC



PRE-WEATHERED ZINC

> QUARTZ-ZINC® > ANTHRA-ZINC®



ENGRAVED ZINC

> AZENGAR®



LACQUERED ZINC

> BILACQUERED

Stone white



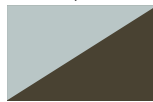
Tile red

Copper green



Macao brown

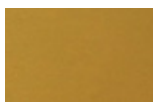
Blue sky



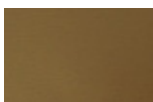
Slate grey

> LACQUERED

Gold zinc n°691



Gold zinc n°1036



COLOURED PRE-WEATHERED ZINC

> PIGMENTO®

Green



Red



Blue



Brown

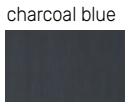


BESPOKE COLOURS

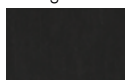
VMZINC® also proposes bespoke colours: contact us.

BLACK COLLECTION

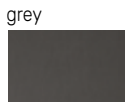
PIGMENTO® charcoal blue



Midnight black



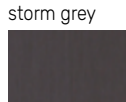
PIGMENTO® grey



Ink black



PIGMENTO® storm grey



TECHNICAL ZINC

To use zinc for warm roofing or in extreme climate conditions, VMZINC® proposes a technical offer composed of ZINC PLUS and ZINC STRAT, of which the underside is protected by a highly corrosion-resistant lacquer, a major component of our Compact roof and Structural roof systems.

Natural zinc

Original zinc

Aesthetic

Of a shiny metal aspect, VMZINC® natural zinc gets its natural patina (semi-dull light grey) after from six months to two years depending on the surrounding environment and its location on the building. It is the historic roofing material.

Technique

Natural zinc is a rolled zinc alloyed with copper and titanium, produced from Z1 quality zinc as per the European EN 1179 standard, that contains at least 99.995 % of zinc.

Technical specifications

Chemical composition	<ul style="list-style-type: none">• copper: 0.08 % minimum and 1.0 % maximum• titanium: 0.06 % minimum and 0.2 % maximum• aluminium: 0.015 % maximum• Z1 grade zinc: at least 99,995%
Mechanical specifications	<ul style="list-style-type: none">• tensile strength Rm (SL)*: 150 N/mm² minimum• elongation at break A_{50mm} (SL): 35 % minimum• yield strength at 0.2 % R_{p0.2} (SL): 100 N/mm² minimum• permanent elongation in the creep test (for 1 hour at a load of 50 N/mm²) (SL): 0.1 % maximum• folding at 180°: no cracks on the fold (fold parallel to the rolling direction) <p><i>*(SL): parallel to the rolling direction</i></p>
Physical properties	<ul style="list-style-type: none">• density: 7.2 kg/dm³• thermal expansion coefficient (SL): 22 x 10⁻⁶ m/(m.K)• melting temperature: 420 °C• recrystallisation temperature: 300 °C• thermal conductivity: 110 W/(m.K)• Electric conductivity: 17 MS/m

The benefits

- > Zinc is essential for rainwater systems and accessories for all types of materials.
- > Easy soldering
- > Zinc of parisian roofs



Architect: Studio Weave

AZENGAR®

Light grey zinc

Aesthetic

AZENGAR® is the lightest, dullest and roughest zinc. It harks back to the old Parisian roofing zinc. It gives a timeless touch to the realizations.

Treatment

AZENGAR® has been developed with an eco-design approach at all stages of its development and industrialization, which makes it the surface aspect with the lowest environmental impact.

The innovating processing modifies both the surface roughness of the natural zinc as well as its colour.

Technical specifications

Roughness (as per ISO 25178)	<ul style="list-style-type: none">• Sa < 3 µm• Sz < 25 µm
Gloss (60°)	< 15 GU
SRI (Solar Reflectance Index)	40

The benefits

- > First engraved zinc
- > Heterogeneous surface with outcrops, insensitive to finger marks
- > Reduced heat island effect in urban areas thanks to its white reflective aspect



QUARTZ-ZINC®

Velvet grey zinc

Aesthetic

QUARTZ-ZINC® has a satin grey and luminous finish, similar to natural zinc with a patina of several months.

Treatment

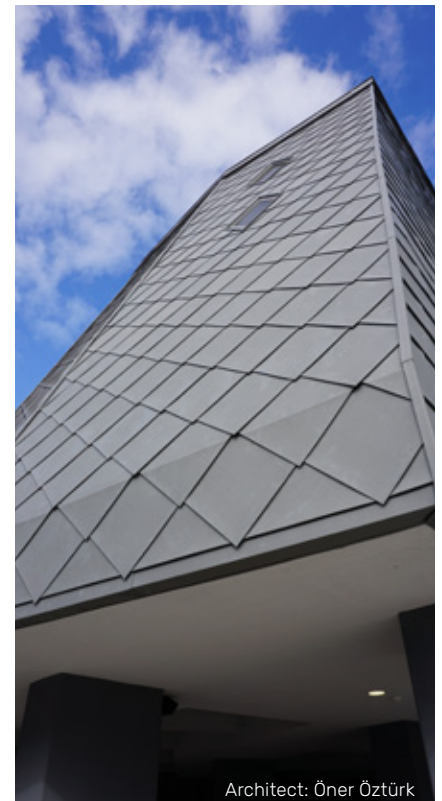
The surface treatment it receives in the factory is a treatment to chemically convert the superficial crystalline structure of the metal into zinc phosphate.

Technical specifications of the surface treatment

Type	Quadrihydrated zinc phosphate (hopeite)
Weight	0.35 mg/m ²
Thickness	1 micrometre approx.
Colour	Luminance 22 < y < 25 (light grey)

The benefits

- > The colour changes very little over time
- > Harmonious combination with other materials



ANTHRA-ZINC®

Dark zinc, close to the colour of slate

Aesthetic

This is an anthracite zinc that is a good match with slate, with which it is often combined. Its thin organic coating protects it and gives it a unique aesthetic.

Treatment

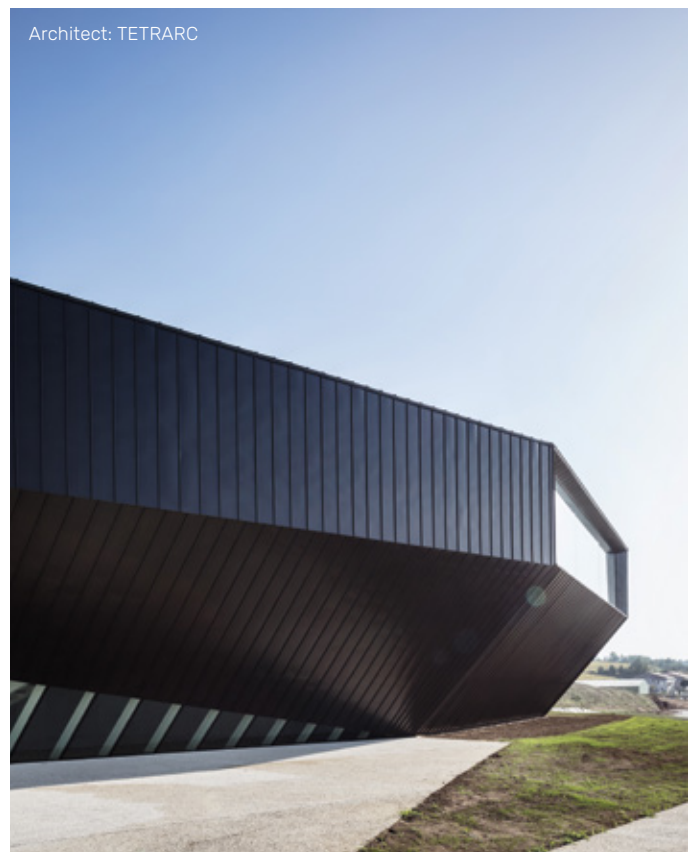
The surface treatment it receives in the factory, a pre-patina, is a treatment to chemically convert the superficial crystalline structure of the metal into zinc phosphate. The applied Thin Organic Coating, an acrylic resin, is between 1 and 2 micrometres thick.

Technical specifications of the surface treatment

Type	Quadrihydrated zinc phosphate (hopeite)
Weight	0.70 mg/m ²
Thickness	2.5 micrometres approx.
Colour	Luminance $5 < \gamma < 7$ (dark grey)

The benefits

- > Elegant dark colour
- > Perfect match with other materials especially natural slate



PIGMENTO®

Coloured zinc

Aesthetic

These colours combine the natural pre-patinated zinc with changing reflections of coloured shades - brown, green, red, blue.

Treatment

It is produced from the QUARTZ-ZINC® substrate to which mineral pigments are added.

This treatment combines chemical conversion of the zinc's metal surface (conversion of the zinc to zinc phosphate) and an organic coating (specific treatment colouring) applied in two coats of a total thickness of 35 µm and a high colour stability.

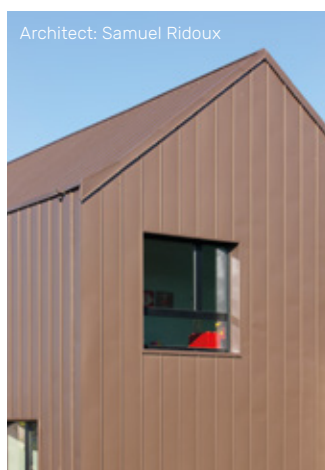
Technical specifications of the coating

Type	Quadrihydrated zinc phosphate (hopeite)
Thickness	35 micrometres approx.

The PIGMENTO® offer is available in 0.70 - 0.80 - 1 mm.

The benefits

- > The answer to modern colour trends with natural and rough shades
- > Matter and light effects
- > Combination with other building materials and other pre-patinated products in the range



PIGMENTO[®] on demand

Coloured zinc

Aesthetic

PIGMENTO[®] has an infinite number of varied colour shades.

Treatment

It is produced from the QUARTZ-ZINC[®] substrate to which mineral pigments are added. This treatment combines chemical conversion of the zinc's metal surface (conversion of the zinc to zinc phosphate) and an organic coating (specific treatment colouring) applied in two coats of a total thickness of 35 µm and a high colour stability.

Technical specifications of the coating

Type	Quadrihydrated zinc phosphate (hopeite)
Thickness	35 micrometres approx.

The creation of a new color is possible for a minimum order of 3 tons of zinc.

The benefits

- > Multitude of coloured shades
- > Creation of colours for unique projects



Architect: Archi 5 Prod



Lacquered zinc

Bright zinc

Aesthetic

The lacquered range includes 6 bilacquered aspects and 2 lacquered aspects. It offers new modern aesthetic solutions.

Treatment

The treatment consists of a continuous application of hot polymerised paint which is carried out in two stages:

- Application of a first coat of polyurethane resin about 5 microns thick,
- Then application of a coat of high durability polyester resin finish about 20 microns thick.

Nota: The treatment is applied on both sides for bilacquered and on the top side for lacquered.

> BILACQUERED

Stone white



Tile red

Copper green



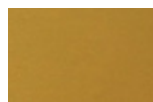
Macao brown

Blue sky

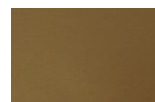


Slate grey

> LACQUERED



Gold zinc n°691



Gold zinc n°1036



Architect: Dmva Architecten

The benefits

- > Intense colours
- > No scaling or traces of rust thanks to its natural patina



Architect: L'Atelier de Saint Georges



Architect: Atelier K

Black collection

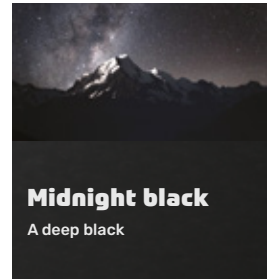
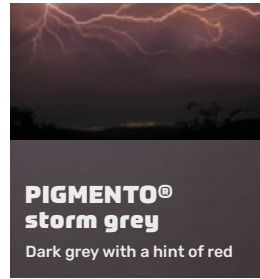
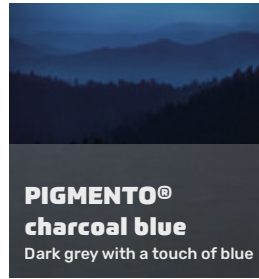
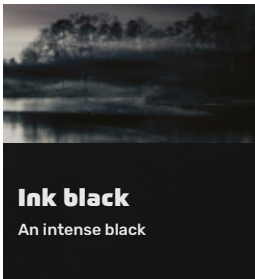
Colours of night

Aesthetic

These colours – dark grey with a touch of blue, opaque black, dark grey with a hint of red, dark grey and deep black – take on many tones depending on the season, the time of day and the weather.

Treatment

A lacquered zinc, three new PIGMENTO® and an ANTHRA-ZINC® STRAT compose this new range.



The benefits

- > Colors with architectural values: elegance, creativity, minimalism
- > Timeless colors that blend perfectly with other colors and materials



Technical zinc

Zinc PLUS and Zinc STRAT

Zinc PLUS

Treatment

The underside is covered with a polyurethane primary layer and a finish layer of organic composite compound (total thickness for both layers: about 55 micrometres).

Specifications

Zinc PLUS can be used for warm non-vented roof applications or on incompatible substrates. The use of Zinc PLUS extends the use of zinc to new situations. Zinc PLUS withstands condensation that forms on the underside of the warm roof. It no longer requires ventilation of the complex on which the Zinc PLUS is installed. However, it is not applicable in areas with a high risk of standing water. Zinc PLUS is available in all surface finishes: Natural zinc/AZENGAR®/QUARTZ-ZINC®/ANTHRA-ZINC®/PIGMENTO®/lacquered.

Zinc STRAT

Treatment

It is covered with a transparent primer used as a tack coat, then a colourless 20 micrometre organic finish coating. A 12 micrometre varnish is applied to the non-commercial side.

Specifications

The natural protective patina of zinc combined with the protective coating increases the resistance of the zinc in certain situations and meets the aesthetic needs of architects and building owners.

Zinc STRAT is available in QUARTZ-ZINC® and ANTHRA-ZINC®.

Benefits of Zinc PLUS

- > Use in warm roof for buildings with very high humidity or on incompatible substrates
- > Protection of the zinc underside

Benefits of Zinc STRAT

- > Additional corrosion protection
- > Technical solution for harsh environment
- > Finger-mark proof



Surface finishes

The choice by a professional of a VMZINC® product adapted to the building environment must include any possible use constraints depending on the surface appearance being considered.

Each zinc surface appearance may change aesthetically over time, differing with the type of environment (seaside, high UV exposure, snow, etc.) and depending on the applications (roofing, facade, rainwater drainage, unrinsed surfaces).

Marks may appear on surfaces not regularly rinsed by rainfall or maintenance. These visible, durable marks can alter the aesthetic perception of the product. They are not a deterioration of the material and have no effect on its service life.

Care should be taken in zones directly subject to sea spray (seaside), the application of zinc on parts of the building not rinsed by rainwater or by maintenance is not recommended as marking can appear. These marks have no effect on the intrinsic qualities of the zinc or its durability, but create an aesthetic disorder.

VMZINC® is manufactured using a color management system based on the Y factor. This varies from 0 to 100: 0 corresponds to black and 100 to white. The range for ANTHRA-ZINC® is 5 to 7 and the range for QUARTZ-ZINC® is 22 to 25.

We recommend that a project be implemented with a single production batch.

If necessary, we recommend contacting VMZINC® services to obtain further information.



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www.vmzinc.com