Aluzinc® in building
Aluzinc®

stands for aluminium and zinc, fused in almost equal proportions to coat the steel sheet with a unique silvery spangle, composed of aluminium (55%), zinc (43.4%) and a touch of silicon (1.6%) to achieve perfect harmony with the steel. The result?
A combination of the strength of steel, the protection of zinc and the stability of aluminium, Aluzinc® is an outstanding product in every way, respecting both the environment and the natural beauty of steel… forever!

Cover
Fire brigade in Libourne (F) –
Architect: Jean-Marie Mazères –
Photo: Inter-Plage

Achieving an architectural tour de force demands construction materials of superior quality. Strength, resistance and stability are key qualities for architects seeking materials that also have timeless aesthetic appeal, whether for indoor or outdoor applications. Aluzinc® stands out as a top-class steel product in its field. Years of manufacturing experience, quality control and a continuing programme of research have made Aluzinc® the success story it is today.
25-year warranty!*

For more than a quarter of a century, Aluzinc® has demonstrated its outstanding resistance to atmospheric corrosion.

This protection against corrosion, which is remarkable for an exclusively metallic coating, is the result of the combined action of aluminium and zinc. The aluminium protects the steel substrate, creating a shield between the surface and the atmosphere. This aluminium barrier is very stable, as the aluminium oxide coating that forms on the surface is insoluble in most environments, thus ensuring a long-lasting resistance to corrosion.

The zinc provides the same protection as it does for galvanised steels whenever the steel substrate is exposed (e.g. by accidental cuts or scratches). In practice, the zinc corrodes instead of the steel, a phenomenon known as sacrificial cathodic protection. The combined effect of these two protective mechanisms ensures that Aluzinc® performs better than steel sheets protected with either pure zinc or pure aluminium.

Over 30 years of monitoring at test sites, over 30 years of manufacturing experience and over 30 years of continuous research and improvement have enabled us to give Aluzinc® coating AZ185 (with a 25-micron coating on each side) a 25-year warranty against perforation due to corrosion.

* ArcelorMittal Flat Carbon Europe can offer a 30-year warranty to its clients, on special request and after a complete building project analysis.
Aluzinc® sets the standard for dry and insulated roofing. This product combines attractive aesthetics with demonstrated durability.

**Aesthetically attractive and exceptionally durable!**
The natural spangled silver finish of Aluzinc® lends an attractive aesthetic quality to the steel sheet. And thanks to the thin, transparent layer of aluminium oxide on its upper surface, the steel will continue to shine for years. In fact, Aluzinc®’s unique combination of aluminium and zinc has a demonstrated track record for outstanding resistance to corrosion, even in highly corrosive environments.

**Efficient and sustainable**
Aluzinc®’s sustainable design optimises your roof’s thermal efficiency. Its long-lasting shine creates excellent reflective power, with the result that an Aluzinc® roof acts as a built-in climate control system.

Creative options for all your roofing needs

Aluzinc® HFX (High Formability eXtended) for standing seam roofs and rainwater systems combines extreme formability with Aluzinc®’s outstanding reputation for corrosion resistance. The result is a new standard in roofing, replacing pure-zinc sheets and offering a cost-effective alternative to other metallic solutions.
An eye-catching cladding solution

Whether your façade is creative, traditional or industrial, Aluzinc® combines attractive aesthetics with demonstrated durability.

Aluzinc® is not your typical steel. Part of ArcelorMittal’s aesthetic range of flat carbon steel products, it offers a one-of-a-kind finish specifically tailored for modern and contemporary façades. Aluzinc® adds a creative touch to transform a unique building into a remarkable one. Modern architecture demands homogeneity and uniformity, and only the Aluzinc® Florelis range offers the guaranteed visual effect needed to create an eye-catching project. A creative option and very popular with architects, Aluzinc® Florelis gives your unique building a prestigious edge...

Prestigious projects need prestigious steel: Aluzinc® Florelis
The creative and decorative solution for indoor architectural projects

University of Mulhouse (F) – Architect: Christian Plisson, ArcelorMittal warehouse in Florange (F), Headquarters of Vendée Habitat in La Rochelle (F) – Architect: ABP Architectes

Thanks to its beautiful appearance and excellent corrosion resistance, Aluzinc® will encourage creativity in your indoor projects.

As a ceiling, Aluzinc® creates a watertight support for a flat roof, and as a wall-covering, it makes the interior bright and attractive.

Aluzinc® owes its gloss to its natural silvery spangle, combined with exceptional light-reflecting characteristics. What’s more, Aluzinc® will retain this natural shine for a long time, thanks to its excellent resistance to atmospheric oxidation.

Finally, with respect to fire resistance, Aluzinc® offers the advantages of metallic coatings: it does not give off any toxic fumes and is not flammable.
For more than a quarter of a century, Aluzinc® has demonstrated its outstanding resistance to atmospheric corrosion. This is the result of the perfect combined action of aluminium and zinc…

Used in various building applications, Aluzinc® offers many other advantages

- Excellent fire resistance without toxic fumes (meets European standard EN 13501-1 A1).
- 100% chromium-free surface treatments that are very environmentally friendly.
- Aluzinc® can be completely recycled.
- Surface recommended for use in food storage areas (NF A 36-712-6).
- Ease of working during bonding, cold forming, cutting, deep drawing, stamping and welding operations.

Traditional cladding in Belgium – Limeparts

Social housing in Paris (F) – Architect: Samuel Delmas

Parking for metro in Toulouse (F) – Architect: Pierre Azéma
European building certifications

Technical requirements for Aluzinc®

Standard dimensions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>0.25 to 2.00 mm</td>
</tr>
<tr>
<td>Width</td>
<td>700 to 1500 mm</td>
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<tr>
<td>Steel grades</td>
<td>DX51D to DX54, DX56D (for Aluzinc® HFX) S220GD to S550GD HK220YD to HK420LD</td>
</tr>
<tr>
<td>Coatings</td>
<td>AZ70, AZ100, AZ150, AZ165, AZ185 &amp; AZ200</td>
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<tr>
<td>Surface treatments</td>
<td>Easyfilm® E or E-Passivation®</td>
</tr>
</tbody>
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Dimensions for specific ranges

<table>
<thead>
<tr>
<th>Range</th>
<th>Thickness</th>
<th>Maximum width</th>
<th>Steel grades</th>
<th>Coating specification</th>
<th>Surface treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluzinc® Florelis (Aesthetic cladding)</td>
<td>0.6 to 1.2 mm (up to 1 mm for S320)</td>
<td>1500 mm (up to 1250 mm for S320)</td>
<td>DX31, S220, S250, S280 and S320</td>
<td>AZ185 Florelis + Easyfilm® E</td>
<td>Easyfilm® E</td>
</tr>
<tr>
<td>Aluzinc® HFX (Standing seam roofs)</td>
<td>0.4 to 2 mm</td>
<td>1350 mm</td>
<td>DX54, DX56</td>
<td>AZ185 HFX + Easyfilm® E</td>
<td>Easyfilm® E</td>
</tr>
</tbody>
</table>

See the Aluzinc® product data sheet E40 in our online product catalogue at www.arcelormittal.com/industry for full details.

We are here to help you

ArcelorMittal’s expert engineers and researchers are here to help.

Let our experts find a solution for all your questions by contacting us at www.arcelormittal.com/industry or by emailing fce.technical.assistance@arcelormittal.com

Credits

Cover: Fire brigade in Libourne (F) – Architect: Jean-Marie Mazières – Photo: Inter-Pliage

p. 2: School & media library in Cavaillon (F) – Architect: Aura Agency – Photo: Christian Michel

p. 3: Marcadet residence in Paris (F) – Architect and photo: Cantin Flanchez Architectures

p. 4: Traditional roof in Belgium – Photo and building owner: Lindab Buildings

Standing seam roof in Sweden – Photo and building owner: Lindab Buildings

Detail of a standing seam roof construction – Photo: Julien Cescon and Philippe Vandenameele

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Galleries school in Toulouse (F) – Architect: Claude Voscors – Photo: Antonio Martinelli

Sophyso plant in Besançon (F) – Architect: Brigitte Métra & Associates – Photo: Julien Cescon

School & media library in Cavaillon (F) – Architect: Aura Agency – Photo: Christian Michel

Airbus Delivery Centre in Toulouse (F) – Architect: Jacques Ferrier

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Indoor cladding in Paris (F)

University of Mulhouse ‘La Fonderie’ – Architect: Christian Pison – Photo: Fonderie

ArcelorMittal warehouse in Florange (F)

Headquarters of Vendée Habitat in La Rochelle (F) – Architect: ABP Architectes – Photo: Serge Chalmeau

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Social housing in Paris (F) – Architect and photo: Samuel Delmas

Traditional cladding in Belgium – Photo and building owner: Limeparts

Parking for metro in Toulouse (F) – Architect and photo: Pierre Azéma

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