

STEEL SPECIFICATION

Granite® HDX

High levels of durability and colour stability for extreme environments



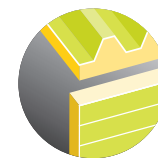
ArcelorMittal

Granite® HDX is manufactured to perform, endure and remain colour stable and attractive even in the coldest of northern climates or the most sun-drenched of southern countries.

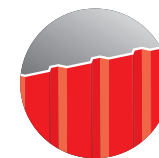
- extended performance lifetime, supported by a guarantee of up to 30 years
- aesthetic colour palette and metallic shades with outstanding colour and gloss retention
- robust metallic substrate (Z225 to Z275 or equivalent) for high corrosion resistance and cut-edge protection
- grained product for surface hardness and excellent robustness for handling and processing



Granite® HDX



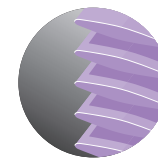
Sandwich panels



Profiled sheets



Cassettes and flat panels



Solar shading



Fins, Blades and narrow elements

Granite® HDX organic coated steel is a tough, but highly attractive and versatile product that will help the full spectrum of external construction projects look better and last longer.

In fact, we guarantee it - for up to 30 years.

Guaranteed enduring aesthetics - even in the coldest, sunniest and warmest climates, this is a coated steel that lasts - beautifully.

Left Project: Parkway Gate student housing complex, Manchester Architect: © Ian Simpson architects
Cladding system: SBC HollandGroep Photography: © Daniel Hopkinson

Right Project: Aproport headquarters, Saint-Marcel, France Architect: © BESSARD L. Architectes
Photographer: © BESSARD L. Architectes



Project: Werkgebouw Post Zuid, Apeldoorn, Netherlands Architects: © Courage architecten and Mies architectuur Photography: © Ian Beck



Project: Stoas Vilentum Hogeschool, Wageningen, Netherlands System supplier: ZND Nedicom in cooperation with Jack Muller B.V. Architects: © BDG Architecten Ingenieurs Zwolle Photography: © Dirk Verwoerd



Applications

Granite® HDX is ideal for roofing and external facades and is more than capable of dealing with harsh, cold northern and sunny southern climates and environments, including:

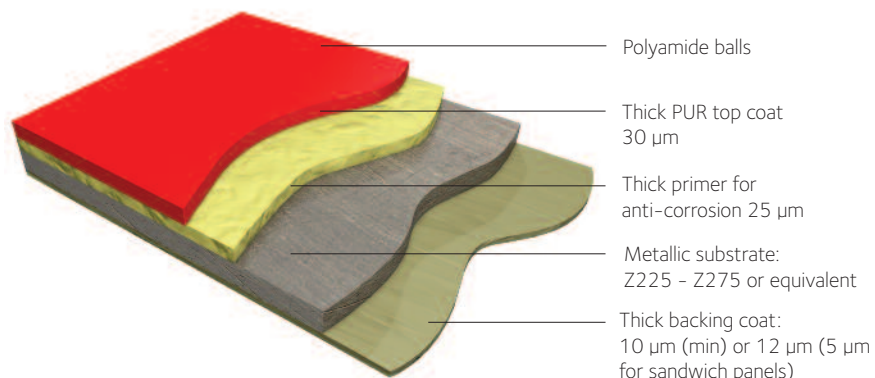
- Cold and wet environments
- Coastal regions (as close as 300 m to the sea)
- Sunny regions with strong UV radiation, such as Africa, The Middle East or The Caribbean
- Industrial and polluted areas

Granite® HDX can be formed into sandwich panels, cassettes, profiled sheets, solar shading elements and fins, blades or other narrow profile elements.

Aesthetics

ArcelorMittal's Granite® HDX is available in a rich diversity of colours - one of the outstanding advantages of organic coated steel. To help you make your choice, ArcelorMittal offers a wide range of colours to suit your project. Other colours are available on request.

All Granite® HDX colours have a grained, satin finish with 30 GU (gloss unit - Gardner 60°) but are also available in matt. When ordering metallic colours, clients should always place an order for the whole building at the same time, or at least for a whole facade. It is also essential to ensure that the material is mounted the right way up.



Performance

High UV and corrosion resistance, very good colour stability, robust surface coating, suitable for buildings exposed to harsh climatic or environmental conditions.

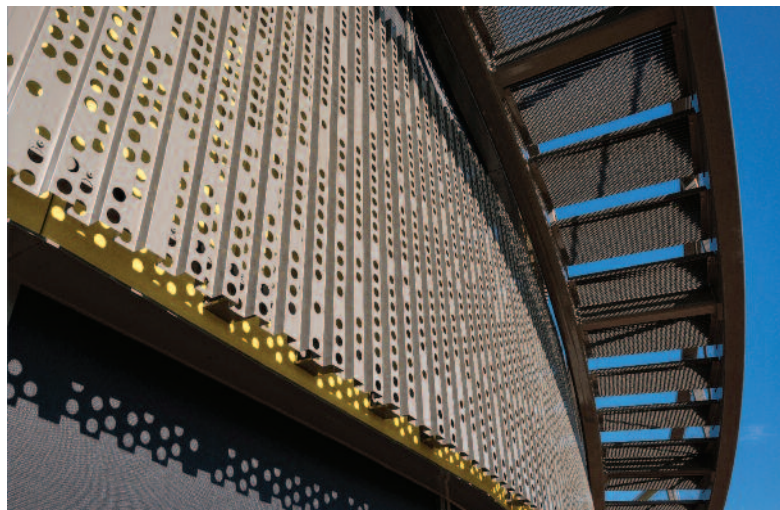
To ensure the best, most consistent quality of Granite® HDX, line products are regularly tested and subjected to outdoor exposure by independently certified bodies.

Technical data

Thickness	0.37 to 2.0 mm
Width	660 mm to 1500 mm (dependent on thickness)
Paint coating thickness	55 µm
Metallic coating	Z225-Z275 (or equivalent)
UV resistance	RUV4
Corrosion resistance	RC5
Fire performance	European standard (EN 13501-1) A1 French standard (FD P92-507) M0 British standard (BS 476) AA
Guarantee	Up to 30 years

Full technical details are available online. Scan the QR code on the back cover.





Project: Stoas Vilentum Hogeschool, Wageningen, Netherlands System supplier: ZND Nedicom in cooperation with Jack Muller B.V. Architects: © BDG Architecten Ingenieurs Zwolle Photography: © Dirk Verwoerd



Automatic guarantees

Why choose Granite® HDX?

- Automatic guarantee, no administrative formalities
- Guaranteed up to 30 years
- Guaranteed up to 15 years as from 300 m from the coastline

Our automatic guarantees are offered in many countries in Western and Eastern Europe, as shown above. For other geographical zones, guarantees may be granted as well – do not hesitate to contact ArcelorMittal.

These guarantees don't require completion of a lengthy questionnaire. According to product type and location, a guarantee will automatically be assigned to the beneficiary.

The very robust paint coating system that Granite® HDX features offers guarantees of up to 30 years.

In extreme environments, even down to as little as 300 m from the coastline, Granite® HDX is guaranteed for up to 15 years. In regions of intense sunlight, guarantees are for up to 15 years.

For analysis of your specific area and requirements, please don't hesitate to contact ArcelorMittal.



Project: 'Upside Down House', Hermosa Beach, California Architect: © Robert Nebolon Architects, San Francisco Photographer: © David Duncan Livingston



How to specify this material

Organic coated steel for severe environmental conditions with RC5 corrosion resistance class, paint coating thickness 55 µm and fire performance A1 (Granite® HDX by ArcelorMittal or equivalent).

See also
sample card
Steel Inspiration



Find out more about
Granite® HDX



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3. Find technical data and detailed catalogues

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Cover large image: Project: Soweto Theatre, South Africa Architect: © Afritects, Clara Cruz-Almeida, Tatenda Mavunga, Sergio Duarte, Tony de Oliveira Photography: © Tony de Oliveira

Smaller images, from left: 1 Project: Porsche Centre, Groningen, Netherlands Architect: VBJ Architectuur Cladding system: SBC HollandGroep Photography: © Mark Sekuur, Prima Focus 2 Project: Social housing units in Salburúa, Spain Architect: © ACXT Photography: © Aitor Ortiz 3 Project: University of Waterloo, Ontario, Canada Architect: © Akitt, Swanson & Pearce Architects Photography: © Joe Bevan. Courtesy of Steel Design Publication, Fall 2012

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STEEL SPECIFICATION

Granite® Silky Mat*

Textured finishes for elegant facades



ArcelorMittal

Granite® Silky Mat offers two finish options: a warm, tactile surface with a slightly sparkling textured appearance combined with very low gloss levels (below 5 gloss units [GU]), and a smooth, slightly grained finish – both ideal for smart and creative facades.

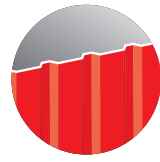
- elegant matt textured or smooth finishes suitable for all facade requirements
- robustness and scratch resistance
- excellent formability
- extensive range featuring 2 finishes and 11 individual colours
- the visual aesthetics of Granite® Silky Mat are so unique that we have protected the design through the Office for Harmonisation in the Internal Market (OHIM)*

*Community Design: No. 002272401 in the name of ArcelorMittal Flat Carbon Europe, S.A

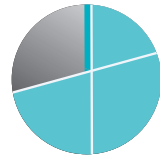




Sandwich panels



Profiled sheets



Cassettes and flat panels



Solar shading



Fins, blades and narrow elements



Created by CDP for ArcelorMittal - All rights reserved - © 2014

Applications

Granite® Silky Mat has been developed for architectural facades, but can be used for various other applications in building projects.

A dedicated and flexible logistics and manufacturing offer has been introduced for Granite® Silky Mat allowing the production of small coils - a minimum of 5 tonnes per reference (depending on the thickness) or roughly 1000 m² in 0.6 mm thickness - to suit specific project requirements.

Aesthetics

Two different finishes are available:

Smooth finish: slightly grained. Available in 5 colours.

Rough finish: slightly sparkling. Includes 6 natural colours.

Performance

Granite® Silky Mat benefits from the excellent mechanical properties of the steel substrate with an extra thick, but flexible paint system, making it scratch-resistant, durable and formable.

Granite® Silky Mat has been subjected to a battery of tests in the laboratory and at outdoor exposure sites to guarantee the best possible product performance.

The product benefits from the ArcelorMittal automatic guarantee of 10 years, and longer guarantees can be granted for specific projects.

Forming

Granite® Silky Mat is suited to all types of forming used for facade systems and fully adapted to sandwich panel manufacture.

Colours

ArcelorMittal's Granite® Silky Mat range of coated steels is available in 11 colours.

To help you make your choice, the Granite® Silky Mat sample card in the Steel inspiration binder, contains real, removable samples and shows the full colour range. Further colours are available upon request.

For more detailed specification and aesthetic decisions, A4 samples of any Granite® Silky Mat colour can be requested.

For further information on the technical properties of the different products and durability guarantees, please consult our website.

Technical data

Thickness	0.5 to 2.0 mm
Width	610 mm to 1500 mm (dependent on thickness)
Paint coating thickness	35 µm
Metallic coating	Z225 - Z275g/m ² or equivalent
Corrosion resistance	RC3
UV resistance	RUV4
Fire performance	A1 in accordance with EN 13501-1
Guarantee	Automatically for 10 years. Up to 15 years for specific projects

Full technical details are available online. Scan the QR code below.



How to specify this material

Organic coated steel, coating thickness of 35 µm with matt aspect and fire performance A1 (Granite® Silky Mat by ArcelorMittal or equivalent).

See also
sample card
Steel inspiration



Find out more about
Granite® Silky Mat



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3. Find technical data and detailed catalogues

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Smaller images, from left: 1 Project: Boulodrome couvert, Meaux, France Architect: © Chartier & Dalix, architectes Photography: © Mathieu Janand

2 Project: Assisted living apartments Milagrosa, Pamplona, Spain Architects: © Juan José Peralta Gracia/Andrés Ayesa Pascual, peraltaayesa arquitectos Photography: © Pablo Arzoz

3 Project: University of Lethbridge Edmonton, Alberta, Canada Architect: © Cohos Evamy Partners Photography: © Robert Jim, Courtesy of Steel Design Publication, Spring 2009

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STEEL SPECIFICATION

Granite® Impression*

Stunning textures and exciting finishes

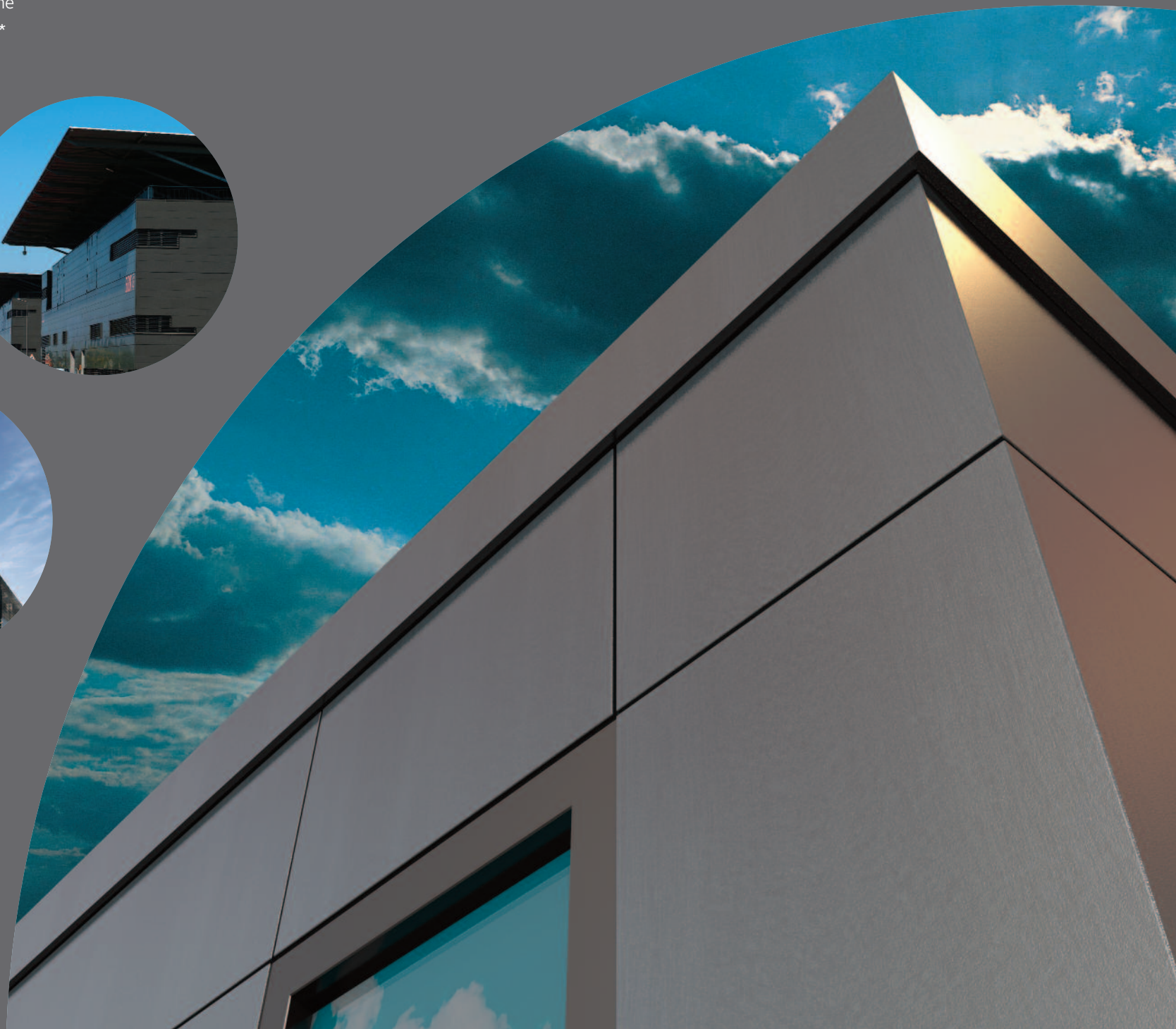


The Granite® Impression range contains uniquely textured and tactile surface finishes that bring innovative and fresh visual scope to the external facade.

The textures have been carefully designed, making the products ideal for both large and-small-scale surfaces.

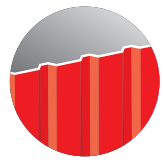
- amazing new finishes and textures
- excellent scratch resistance
- hard, mineral surface
- the ground-breaking new aesthetics are so unique that we have protected the designs through the Office for Harmonisation in the Internal Market (OHIM)*

*Community Design: Nos. 002272401 and 002347245 in the name of ArcelorMittal Flat Carbon Europe, S.A

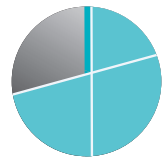




Sandwich panels



Profiled sheets



Cassettes and flat panels



Solar shading



Fins, blades and narrow elements



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Applications

Granite® Impression has been specially developed for prestige architectural facades, but can also be used for a variety of other applications. It can be formed into sandwich and cassette panels, profiled sheets, solar shades and fins, blades and other slim profile elements.

A dedicated and flexible logistics and manufacturing offer has been introduced for Granite® Impression allowing the production of small coils - a minimum of 5 tonnes per reference (depending on the thickness) or roughly 1000 m² at 0.6 mm thickness - to suit specific project requirements.

Aesthetics

Patterns and textures inspired by nature that make your building unique, whilst simultaneously integrating beautifully with the built environment.

- **Snake:** like snake skin, covered with scales, of various shapes and sizes, this pattern offers random scales of various hues and varying longitudinal forms, all clearly visible. The scaled surface diffracts light and gives a strong shiny aspect varying during the day. The lightly structured surface gives the building an amazing textural look and feel.
- **Elephant:** like the skin of an elephant, a very tough-looking and wrinkled appearance. This pattern creates a structural surface that generates a powerful impression on any building.
- **Agate Green and Brown:** like Agate - a microcrystalline variety of silica characterised by its fineness of grain and brightness of colour - our Green and Brown Agate finishes feature polished patterns, giving the impression of inlays of iron oxide. The unusual mineral beauty of these two hues give the facades a rich, prestige appeal.

Performance

Aesthetics do not come at the expense of performance with Granite® Impression, which has a robust, yet flexible paint system, making it scratch-resistant, durable and formable.

Granite® Impression is subjected to a battery of tests in the laboratory and at outdoor exposure sites to guarantee the best possible product performance.

Forming

Granite® Impression is suited to all types of forming for facade systems: cassettes, sandwich panels or corrugated profiles.

Colours

ArcelorMittal's Granite® Impression range of coated steels is available in 3 distinctive patterns, each a different colour.

To help you make your choice, the Granite® Impression sample card in the Steel inspiration binder, contains real, removable samples and shows the full colour and pattern range.

For more detailed specification and aesthetic decisions, A4 samples of any Granite® Impression pattern/colour can be requested.

For further information on the technical properties of the different products and durability guarantees, please consult our website.

Technical data

Thickness	0.29 to 1.8 mm (dependent on width)
Width	600 mm to 1500 mm (dependent on thickness)
Paint coating thickness	Agate Green and Brown - 35 µm Snake and Elephant - 45 µm
Metallic coating	Z225-Z275 or equivalent
Corrosion resistance	RC3
UV resistance	RUV4
Fire performance	A1 in accordance with EN 13501-1
Guarantee	10 years

Full technical details are available online. Scan the QR code below.



How to specify this material

Organic coated steel with amazing finishes and a paint coating thickness of 35 µm (Agate Green and Brown) 45 µm (Snake and Elephant), free of hexavalent chromium and heavy metals (Granite® Impression by ArcelorMittal or equivalent).

See also
sample card
Steel inspiration



Find out more about
Granite® Impression



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Images, from left: 1 Project: Canadian Forces Flying Training School Southport, Manitoba, Canada Architect: © Daniel Johnson Architect Inc. and Garth Norbraten Architect Inc. Photography: © Gerry Kopelow, Courtesy of Steel Design Publication, Spring 2010

2 Project: Courthouse of Grenoble, France Architect: © Claude Vasconi Photography: © Philippe Ruault

3 Project: Société Turbomeca, groupe Safran, Site de Bordes, Bâtiments Joseph Szydowski, France Architect: © Brunerie & Irissou, architectes Photography: © Follet Visuels

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STEEL SPECIFICATION

Indaten®

Beautiful weathering steel which evolves with the environment



ArcelorMittal

Indaten® weathering steel evolves with its environment, changing and developing on a daily basis – always improving, always protecting.

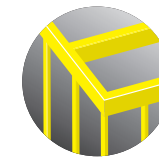
- no painting or chemicals necessary to protect the material
- beautiful and ever-changing appearance
- natural protection against corrosion
- lower maintenance costs
- eco-friendly and 100% recyclable
- high longevity



Indaten®



Cassettes and flat panels



Framing



Indaten® belongs to the same group of steel alloys as the well-known Cor-Ten steel (with ASTM international standards) and offers the same levels of performance.

As a maintenance-free material that can last for 80 years, Indaten® weathering steel has been the product of choice for buildings, bridges and sculptures since 1930 and has been used extensively on a range of fine architectural projects that have an on-going 'visual dialogue' with their environment, changing and improving as time goes by.

Like a fine wine, Indaten® weathering steel is enriched by air and enhanced with age. When exposed to the natural environment, Indaten® develops a beautiful patina that serves as protective armour.



ArcelorMittal

Left Project: Campus Vesta, Emblem, Belgium Architect: © STRAMIEN, Architectuur en Ruimtelijke Planning cvba Photography: © Chak Lopez

Right Project: Multisports stadium, Cannes la Bocca, France Photographer and architect © Roberto Ferreira, RFArq, Barcelona



Luxembourg's national pavilion at the Shanghai Expo in 2010 ArcelorMittal Architect: © Hermann & Valentiny et Associés Photography: © Pierre Engel



Metal Structures Centre, Zwijnaarde Technologiepark, Belgium Architect: © Patrick Lefebure, Archipl Architecten Photography: © Roger Hubert, ArcelorMittal



Applications

Indaten® can be made into flat cassettes or curved panels. It can be used for facades, steel structures, fences and barriers, bridges, architectural and sculptural objects as well as for interior applications. It is easily formable, can be perforated, embossed with patterns or given combinations of finishes.

Aesthetics

Indaten® develops its patina following exposure to the atmosphere. The first oxide layer appears within a few weeks, with the final colour being achieved within one to two years. The finish can last, without maintenance, for at least 80 years.

The primary alloying material in weathering steel is copper, at concentrations up to 0.55%. The copper produces a homogeneous and regenerating protective layer over the surface, which slows corrosion, ensures the integrity of the underlying steel and creates the beautiful, natural patina.

The development of the patina

The patina's appearance depends on time, the average temperature of exposure and exposure to moisture. The appearance is also influenced by such things as the concentration of SO₂ or chloride content in the air. For example, when used in an industrial environment, the patina tends to develop a darker colour than when used in rural areas.

Indaten® is supplied unweathered but over time, the patina will transform from its red-orange colour to a dark, purplish brown colouration. Although the process can take up to two years, it can be accelerated with sandblasting and, to ensure a homogeneous development of the patina, sandblasting by specialised sub-contractors is recommended.

Performance

Properly installed, Indaten® is a material that has a symbiotic relationship with its environment – natural environmental processes improve Indaten® and Indaten® improves the environment, requiring no maintenance for up to 80 years.

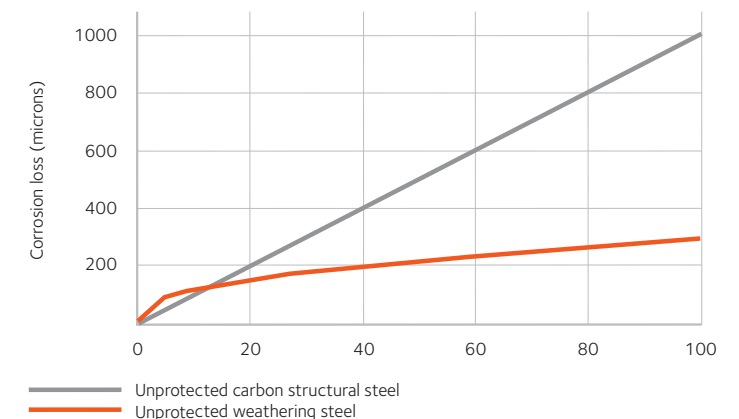
Welding and joining

Indaten® 355A (hot rolled steels) enjoys excellent performance using all common welding processes.

However, when using weathering steel, specific fasteners are required. It is highly recommended that you avoid having your weathering steel come into contact with aluminium, copper, zinc or stainless steel. Always use an elastomer to prevent contact between the bolt and the panel. The ideal solution is to use fasteners also made of weathering steel.

Functionality

The protective layer appears when the steel surface is exposed to an alternately wet/dry environment. Building an optimal protective layer greatly limits corrosion rates and prevents a reduction of the steel's overall thickness (see graph below).



Corrosion losses weathering steel versus carbon structural steel

Technical data

Product	Indaten® 355A
Thickness	2.0 - 5.0 mm
Max. coil width (dependent on thickness)	1880 mm
Fire performance	European standard (EN 13501-1) A1 French standard (FD P92-507) M0 British standard (BS 476) AA

Full technical details are available online. Scan the QR code below.

Standards compliance

Indaten® satisfies the requirements for EN 10025-5:2005.

Specification considerations

In your design, be sure you avoid:

- Permanent humidity and condensation
- Extreme industrial atmospheres
- Corrosive fumes
- Marine environments
- Contact with de-icing salt

Additionally, to maintain the material's excellent aesthetics, proper management of run-off water is required to avoid staining (e.g. using gutters, drainpipes etc). When using weathering steel, always use specific fasteners.



How to specify this material

Weathering steel, developing patina during exposure to the atmosphere (Indaten® 355A by ArcelorMittal or equivalent).



Project: Metal Structures Centre, Zwijnaarde Technologiepark, Belgium Architect: © Patrick Lefebure, Archipl Architecten Photography: © Roger Hubert, ArcelorMittal



Project: Théâtre de l'Archipel, Perpignan, France Architect: © Ateliers Jean Nouvel & Brigitte Metra Associées, Photography: © Philippe Ruault

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Cover large image: Project: Théâtre de l'Archipel, Perpignan, France Architect: © Ateliers Jean Nouvel & Brigitte Metra Associées Photography: © Philippe Ruault

Smaller images, left to right: 1 Project: Extension of the Briggittines Theatre, Brussels, Belgium Studio Bruno and SumProject Architect: © Andrea Bruno Photography: © Archive of Studio Bruno

Project: Portia Winery in Ribera del Duero, Spain Architect: © Nigel Young, Foster + Partners Photography: © Foster + Partners

3 Project: FNEL Luxembourg headquarters Architect: © hsa - heisbourg strotz architectes, Luxembourg Photography: © Gilles Martin

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STEEL SPECIFICATION

Aluzinc® Florelis

Enduring natural beauty

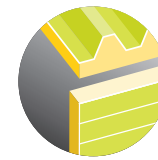


Aluzinc® Florelis is the perfect combination of strength and beauty making it an outstanding product in every way.

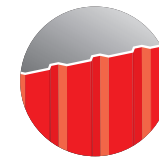
- precision engineered aesthetics
- stunning reflectivity against heat and light - up to 80% of sunlight
- excellent reaction to fire
- superior resistance to abrasion and weathering
- flexibility for easy forming, profiling and other needs
- 25-year warranty - possible extension to 30 years on request



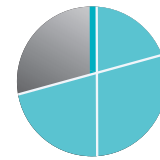
Aluzinc® Florelis



Sandwich panels



Profiled sheets



Cassettes and flat panels



Solar shading



Fins, blades and narrow elements

Aluzinc® Florelis enhances and performs on facades and interiors, respecting both the environment and the natural beauty of steel.

Aluminium and zinc - fused in almost equal proportions - coat the steel with a unique silvery spangled coating, composed of aluminium (55%), zinc (43.4%) and a touch of silicon (1.6%) to achieve perfect harmony with the steel and a unique, glittering finish.

Aluzinc® Florelis is beautiful, flat carbon steel with a unique spangled alloy coating and has outstanding resistance to corrosion, even in highly aggressive environments.

Left Project: School & media library, Cavaillon, France Architects: © Aura Agency, Marseille
Photography: © Christian Michel

Right Project: Parking Métro des Argoulets, Toulouse, France Architects: © Azéma Architectes, Toulouse
Photography: © Pierre Azéma



Project: Théâtre de l'Archipel, Perpignan, France Architects: © Ateliers Jean Nouvel & Brigitte Metra Associées Photography: © Philippe Ruault



Applications

Exterior

A 25-year warranty, available in the construction sector, covers the resistance to perforation and rupture of Aluzinc® Florelis coating AZ185 due to corrosion. Completed buildings have demonstrated that Aluzinc® Florelis shows no sign of rust after 30 years in most environments.

Its excellent resistance to atmospheric oxidation also enables Aluzinc® Florelis to keep its natural colour and gloss.

Aluzinc® Florelis is a metallic coated steel, delivered pre-coated with Easyfilm® E protection, that can be used without further treatment, which can represent significant savings. Its excellent heat reflection performance means Aluzinc® Florelis also significantly contributes to climate control in the building.

Interior

Aluzinc® Florelis can be used for interior ceilings, walls or even as coverings for desks and other furniture. It is a high-performance and highly aesthetic material that is completely odour-free and has excellent fire resistance.

Aesthetics

Aluzinc® Florelis natural faceted and spangled silver finish lends an attractive aesthetic appearance to the steel sheet, which, thanks to the thin transparent layer of aluminium oxide on its top surface (part of the aluminium/zinc coating), will continue to shine over time.

Contemporary architecture demands absolute consistency, and Aluzinc® Florelis offers a guaranteed spangle number between 1,000 and 1,800 spangles/dm². With its clean and highly reflective lines, this helps give your project a razor-sharp and luminous aesthetic clarity.

Performance

Aluzinc® Florelis comes with an Easyfilm® E thin organic coating. This prevents fingerprinting and also reinforces the temporary protection of the material during transport and storage.

25-year warranty

Over 25 years of observations in test stations, over 25 years of manufacturing experience and over 25 years of continuous research and improvement have

enabled us to give Aluzinc® Florelis coating AZ185 (with a 25-micron coating on each side) a 25-year warranty against perforation due to corrosion.

An additional extension to the warranty to provide up to 30 years' cover can be achieved for specific projects.

This protection against corrosion, which is remarkable for an exclusively metallic coating, is the result of the combined action of aluminium and zinc (the zinc corrodes instead of the steel, a phenomenon known as sacrificial cathodic protection) ensuring a long-lasting resistance to corrosion and outperforming galvanised steels.

Fire performance

Aluzinc® Florelis is classified A1 (best in class), much higher than timber (B to E – dependent on the presence of flame retardants). In the event of a fire, Aluzinc® Florelis profiles will not propagate fire and will also resist to burning brands when submitted to external fire.

Technical data

Thickness	0.6 to 1.2 mm (up to 1 mm for steel grade S320GD)
Metallic coating	AZ185 + Easyfilm® E
Coating	Continuous hot dip double-sided aluminium/zinc coating with Easyfilm® E
Steel grades recommendation	For bending operations like facade cassettes: DX51D or S220GD, S250GD, S280GD and S320GD; for roofing profiles: S280GD or S320GD; for drawing processes: DX54D or DX56D
Fire performance	European standard (EN 13501-1) A1 French standard (FD P92-507) M0 British standard (BS 476) AA
Warranty	25 years
Certifications and compliance	SP (SITAC), CSTB, BBA, U, DIN 55928-8

Full technical details are available online. Scan the QR code on the back cover.



Project: Marcadet Residence, Paris Architects: © Cantin Planchez Architectures
Photography: © Luc Boegly



Project: Lycée Gallieni, Toulouse, France Architect: © Vasconi Associés Architectes
Photography: © Antonio Martinelli



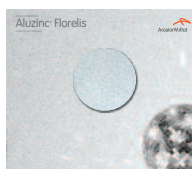
How to specify this material

Metallic coated steel, coated with zinc (43.4%) and aluminium (55%), 25 µm on each side and with a protective film (Aluzinc® Florelis by ArcelorMittal or equivalent).



ArcelorMittal

See also
sample card
Steel Inspiration



Find out more about
Aluzinc® Florelis



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steel.envelope@arcelormittal.com

Cover large image: Project: Fire brigade in Libourne, France Architect: © Atelier des Architectes Mazières and Agence Ragueneau et Roux Photography: © photo POSITIF Bordeaux

Smaller images, from left to right 1 Project: Sports hall in Toulon, France Architect: © Jean Chabanne Photography: © Hervé Abbadie

2 Project: Météor Building in Saint-Nazaire, France Architect: © Jean-Claude Pondevie, Blanchard Marsault Pondevie Architectes Photography: © Stéphane Chalmeau

3 Project: Airbus Delivery Centre in Toulouse, France Architect: © Jacques Ferrier Photography: © Luc Boegly

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STEEL SPECIFICATION

Granite® Wood

Long-lasting, maintenance-free timber aesthetics



Granite® Wood offers natural wood appearance and attractive finishes for a range of constructions and details.

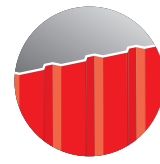
There is a generous palette of wood grain textures, which have been thoroughly tested to the highest standards.

- attractive wood finishes with easy assembly and minimal maintenance
- better fire reaction than actual wood
- long-term colour stability
- wide variety of wood types available with guaranteed reproducibility
- the attractive appearance of timber but with the strength and durability of steel

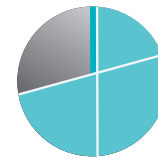




Sandwich panels



Profiled sheets



Cassettes and flat panels



Photography: © Philippe Vandenameele



Project: Private house, Poland Photography: © Francis Crochet, ArcelorMittal

Applications

Mainly designed for outdoor applications (facade), but can also be used for fascias and soffits.

Aesthetics

ArcelorMittal's Granite® Wood range of organic coated steels is available in a rich diversity of authentic timber finishes, from fine-grained pale textures to richly grained, darker, hard woods.

Performance

Granite® Wood has the beauty of wood with the performance of steel and is subjected to a battery of tests in the laboratory and at outdoor exposure sites to guarantee the best possible product performance.

Granite® Wood benefits from the ArcelorMittal automatic guarantee against perforation and non-peeling of the paint film which will maintain the aesthetics of the building as if new.

Forming

Granite® Wood is suitable for profiling and deep drawing processes and can be assembled using joining techniques such as clinching, riveting and adhesive bonding.

Colours

ArcelorMittal's Granite® Wood range of organic coated steels is available in a rich diversity of tones, woodgrains and colours. To help you make your choice, the Granite® Wood sample card in the Steel inspiration binder contains a real, removable sample and shows the full colour range. Further colours are available upon request.

For more detailed specification and aesthetic decisions, A4 samples of any Granite® Wood colour can be requested.

For further information on the technical properties of the different products and durability guarantees, please consult our website.

Technical data

Thickness	0.29 to 1.8 mm
Width	600 mm to 1500 mm (dependent on thickness)
Paint coating thickness	35 µm
Metallic coating	Z225 g/m ² or equivalent
UV resistance	RUV4
Corrosion resistance	RC3
Fire performance	A1 in accordance with EN 13501-1
Guarantee	10 years

Full technical details are available online. Scan the QR code below.



How to specify this material

Organic coated steel for outdoor applications, with paint coating thickness of 35 µm and fire performance A1 (Granite® Wood by ArcelorMittal or equivalent).

See also
sample card
Steel inspiration



Find out more about
Granite® Wood



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Cover large image: Project: Maison Génillé, France Architect and photography: © Lionel Coutier
Smaller images, from left: 1 Project: Drift Bay House, Queenstown, New Zealand Architect: © Kerr Ritchie Architects Photography: © Paul McCredie, Courtesy of Steel Design Publication, Spring 2010

2 Project: Chiquita, Gorinchem, Netherlands Architect: Versnel en Partners Architecten en ingenieurs Photography © 2013 ArcelorMittal, All rights reserved

3 Project: The Box House, Boulder, Colorado, USA Architect: © Rob Pyatt Photography: © Michael DeLeon michaeldeleonphoto.com, Courtesy of Steel Design Publication, Fall 2010

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STEEL SPECIFICATION

Solano®

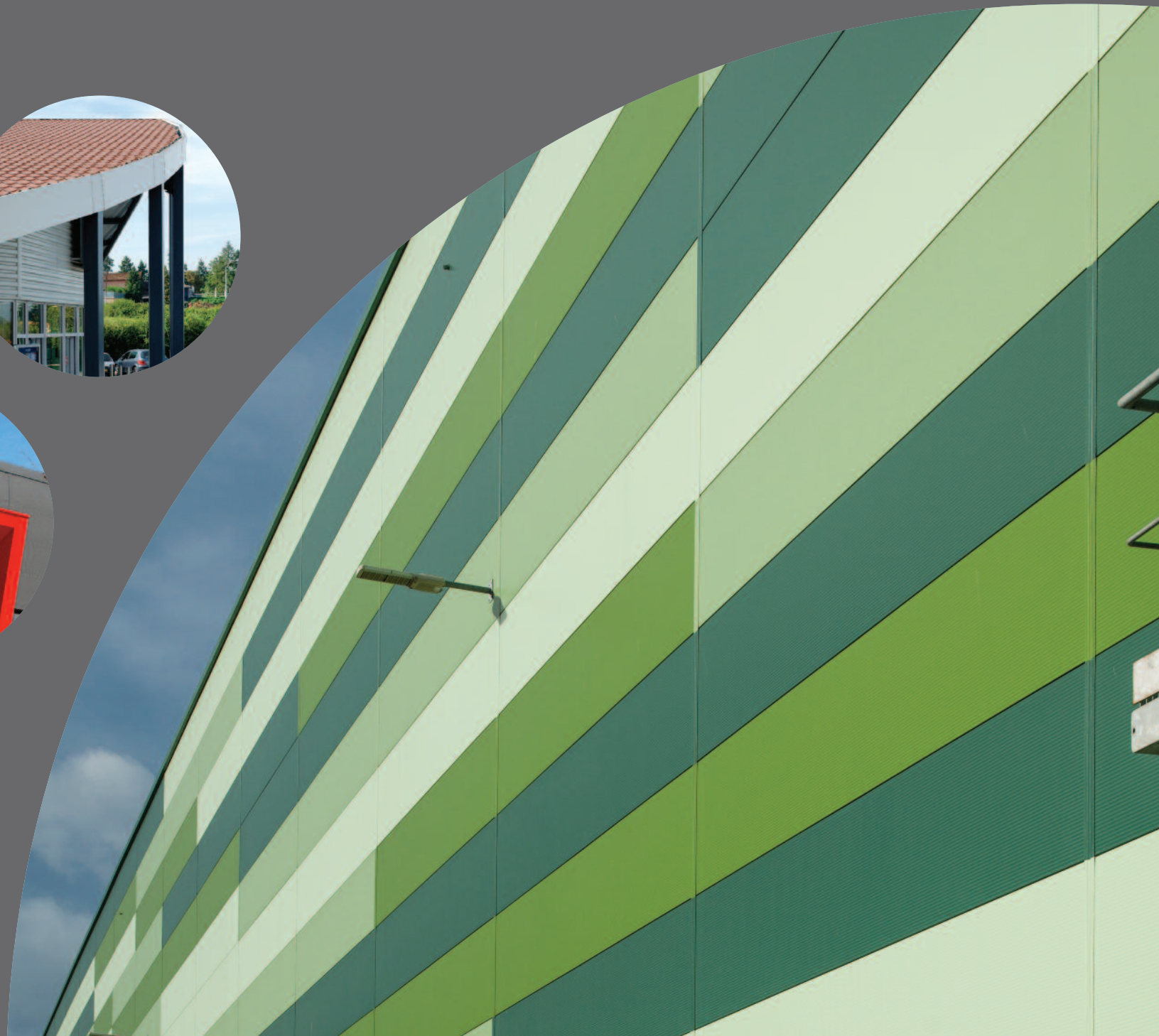
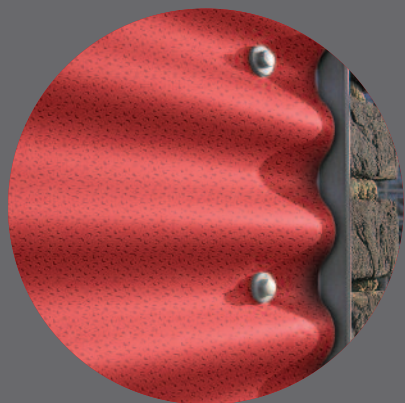
Deep, robust and flexible paint for long-life systems for harsh, Northern environments



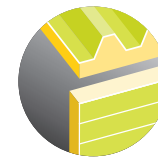
ArcelorMittal

Solano® has been specially developed to combine robustness and longevity.

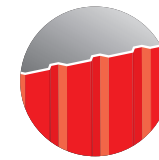
- excellent corrosion resistance thanks to a 200 µm thick robust and flexible paint



Solano®



Sandwich panels



Profiled sheets



Fins, blades and narrow elements

Solano® offers reinforced protection to the building envelope. With its advanced paint technology, Solano® is a range of plastisol organic pre-finished steels for roofing and cladding suitable for more aggressive industrial applications in harsh, corrosive environments.

- Excellent corrosion resistance
- 'Self-healing' paint properties - an advantage when handling the product
- 5 embossed designs featuring a range of patterns and textures

Few materials are as colourful and versatile as Solano®. As a cladding for walls and roofs, Solano® is at the forefront of the battle against the elements from heavy industry to high-rise housing.

Left Project: Morrisons Supermarkets distribution centre in Bridgewater, UK Architect: © DLA Architecture System provided by: Kingspan Photography: © Richard Seymour

Right Project: Quantore Office, Beuningen, Netherlands Architect: © Wilbert Hofmeester System supplied by: Jack Muller



Re-cladding: ArcelorMittal Dofasco's #4 Blast Furnace and cast in Solano® Photography: © ArcelorMittal Dofasco Canada



Project: LIDL Supermarket, ZA de la Mirandole, Villerest, France Architect: © Albert Mathieu, Bureau d'études ALBERT, 57 Building system provided by: BACACIER Photography: © Nicolas Fussler



Applications

Solano® is built to last. Whatever the building is, Solano® extends the lifetime of its envelope. This is why Solano® is one of the most widely used coated steels throughout Northern Europe for a range of commercial and industrial buildings.

Solano® steels can be processed by bending, cold roll forming and deep drawing without damaging the top surface. They can also be assembled with joining techniques such as clinching, riveting and adhesive bonding. The thermoplastic paints provide high surface robustness and ease of handling during envelope construction.

Thanks to all these properties, Solano® can be used for both roofing and facade building systems: cassettes, profiles and sandwich panels.

Aesthetics

ArcelorMittal's Solano® range of organic coated steels is available in a rich diversity of colours and 5 patterns. To help you make your choice, ArcelorMittal offers a wide range of colours to suit your taste and your budget. Diversity and originality will be your trademark.

Further colours are available on request.

Solano® specification area

Solano® can be specified for use in Northern and harsh climatic environments, within the area shown below.



Area where Solano® can be specified

Performance

To demonstrate its performance under different conditions, the Solano® range has been subjected to aggressive laboratory and outdoor testing.

Solano® is designed in accordance with ArcelorMittal's sustainable development policy.

Corrosion resistance

Following subjection to 1000 hours of salt spray testing, Solano® on galfan ZA265 shows excellent corrosion resistance on scratches.

Technical data

Thickness	0.4 to 1.2 mm (up to 1 mm for S320GD)
Width	700 mm to 1500 mm (dependent on thickness)
Coating	200 µm thick paint system on metallic substrate ZA265 or equivalent Z coating
UV resistance	up to RUV4
Corrosion resistance	up to RC5
Fire performance	European standard (EN 13501-1) A1 Cs2d0 French standard (FD P92-507) M0 British standard (BS 476) AA
Certifications and compliance	BBA, SP (SITAC), CSTB

Full technical details are available online. Scan the QR code below.



Project: Morrisons Supermarkets distribution centre in Bridgewater, UK Architect: © DLA Architecture System provided by: Kingspan Photography: © Richard Seymour

**How to specify this material**

Organic coated steel with paint coating thickness 200 µm, on a metallic steel substrate from Z225 to ZA265 'galvan' or equivalent (by ArcelorMittal or equivalent).

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Cover large image: Project: Morrisons Supermarkets distribution centre in Bridgewater, UK Architect: © DLA Architecture System provided by: Kingspan Photography: © Richard Seymour

Smaller images, from left: 1 Photography: © Philippe Vandenameele 2 Project: Base aérienne, La Rochelle, France Architect and photography: © Lionel Coutier

3 Project: Supermarché Lidl, ZA de la Mirandole à Villerest, France Architect: © Albert Mathieu, Bureau d'études ALBERT, 57 Building system provided by: BACACIER Photography: © Nicolas Fussler

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STEEL SPECIFICATION

Granite[®] Deep Mat

Deeply textured matt finish

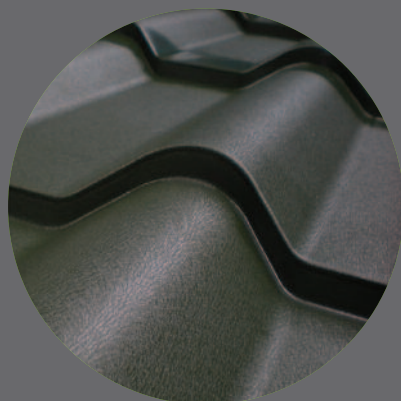


ArcelorMittal

Granite[®] Deep Mat is an excellent, tough and attractive steel suited to most external construction for residential, commercial or industrial projects.

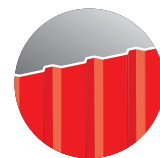
With its generous palette of deep textures and thoroughly tested to the highest standards, it adds an extra visual dimension to any project.

- strong aesthetics
- deeply matt appearance
- excellent formability
- excellent corrosion resistance
- up to 15 years' guarantee

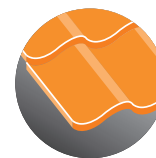




Sandwich panels



Profiled sheets



Tile panels



Project: Sportcomplex Nieuwehorne, Netherlands Architect: Strategie Architecten Photography: © 2013 ArcelorMittal, All rights reserved

Applications

External building applications: tiles, panels, sandwich panels, profiled panels etc.

Aesthetics

ArcelorMittal's Granite® Deep Mat range of organic coated steels is available in a rich diversity of ArcelorMittal colours with a deep matt textured finish.

Performance

Granite® Deep Mat is subjected to a battery of tests in the laboratory and at outdoor exposure sites to guarantee the best possible product performance.

Up to 15 years' guarantee is available (depending on the environment) on a Z225 g/m² steel substrate or equivalent. ArcelorMittal guarantees resistance against perforation of the metallic substrate and the non-peeling of the paint film.

Forming

Granite® Deep Mat is suitable for profiling and deep drawing processes, and can be assembled using joining techniques such as clinching, riveting and adhesive bonding.

Colours

ArcelorMittal's Granite® Deep Mat range of organic coated steels is available in a rich diversity of textured colours. To help you make your choice, the Granite® Deep Mat sample card in the Steel inspiration binder, contains a real, removable sample and shows the full colour range. Further colours are available upon request.

For more detailed specification and aesthetic decisions, A4 samples of any Granite® Deep Mat colour can be requested.

For further information on the technical properties of the different products and durability guarantees, please consult our website.

Technical data

Thickness	0.37 to 1.2 mm
Width	610 mm to 1500 mm (dependent on thickness)
Paint coating thickness	35 µm or 40 µm available
Metallic coating	Z225 - 275 g/m ² or equivalent
UV resistance class	RUV3 (35 µm and 40 µm)
Corrosion resistance	RC3 (35 µm), RC4 (40 µm)
Fire performance	A1 in accordance with EN 13501-1
Guarantee	Up to 15 years

Full technical details are available online. Scan the QR code below.



How to specify this material

Organic coated steel, with a deep matt appearance and coating thickness of 35 µm or 40 µm and free of hexavalent chromium and heavy metals (Granite® Deep Mat by ArcelorMittal or equivalent).

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Cover large image: Photography: © ExSteel division of Steelway

Smaller images, from left: 1 Photography: © Pawel Patyk, courtesy of Budmat

2 Project: FAREKS production facility in Skopje, Macedonia – own design and construction

Photography: © FAREKS

3 Project: Residential House – courtesy of Pruszyński SP. z o.o.

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STEEL SPECIFICATION

Granite® Storm

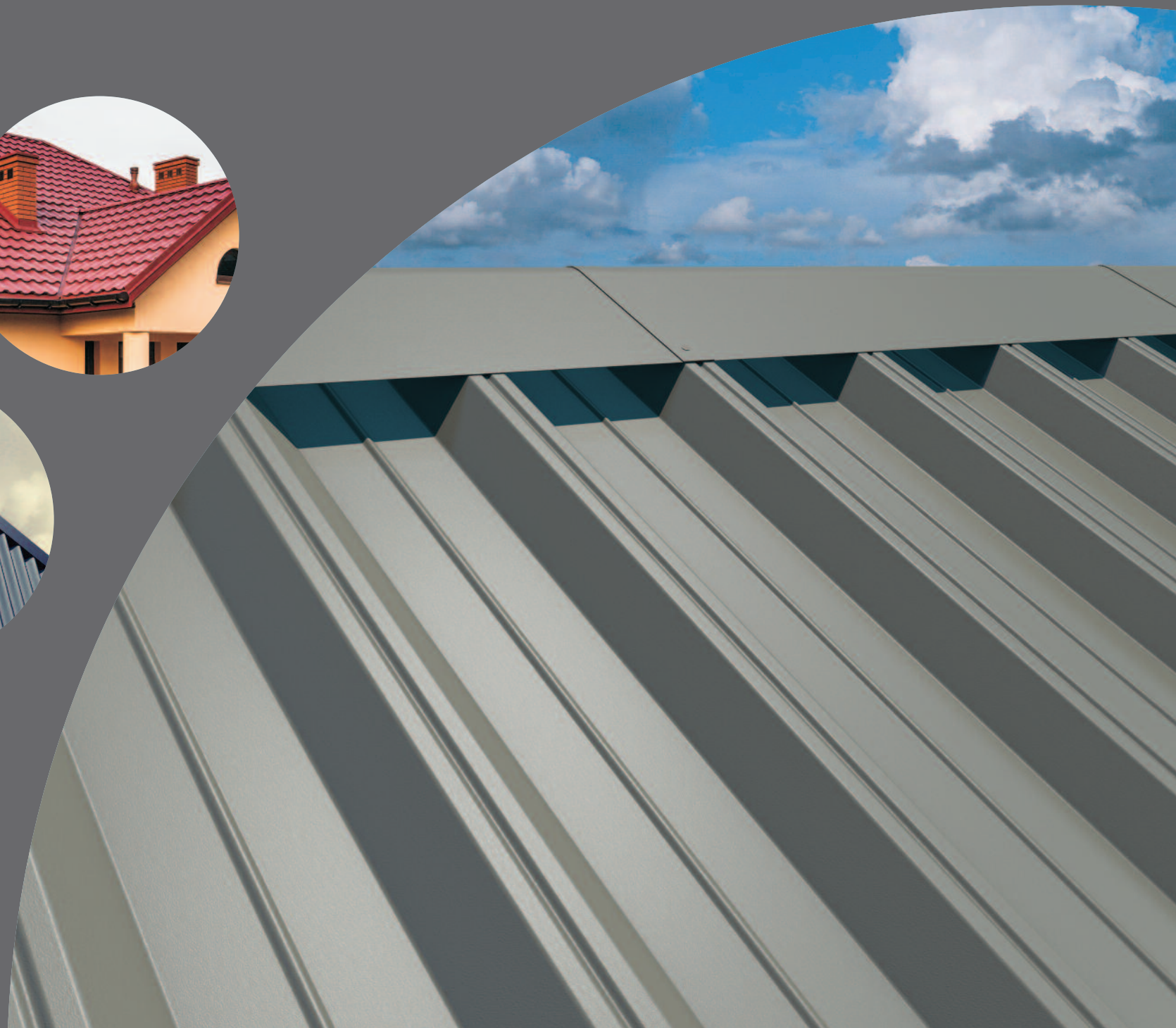
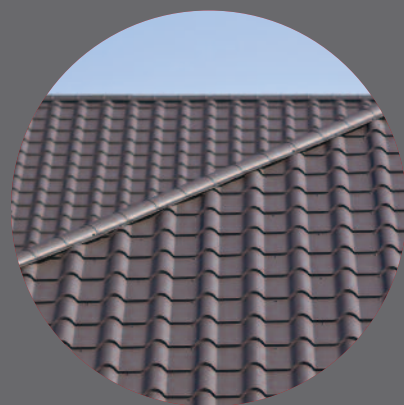
Extended durability with matt finish



Granite® Storm is a pre-painted steel for roofing applications offering superb robustness, thanks to a thick and flexible organic coating combined with an optimised metallic steel substrate. It is particularly specified for roofs where quality and durability are key assets.

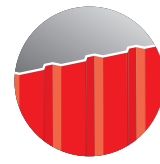
Granite® Storm is an ideal alternative to the traditional tiled roof, as it offers the highest levels of durability. Thanks to Granite® Storm, roofs can be built to last for more than a generation, and are able to resist whatever nature throws at them.

- deeply textured matt finish
- long lifetime, up to 30 years' guarantee
- excellent formability
- extensive colour range with unmatched UV resistance

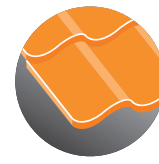




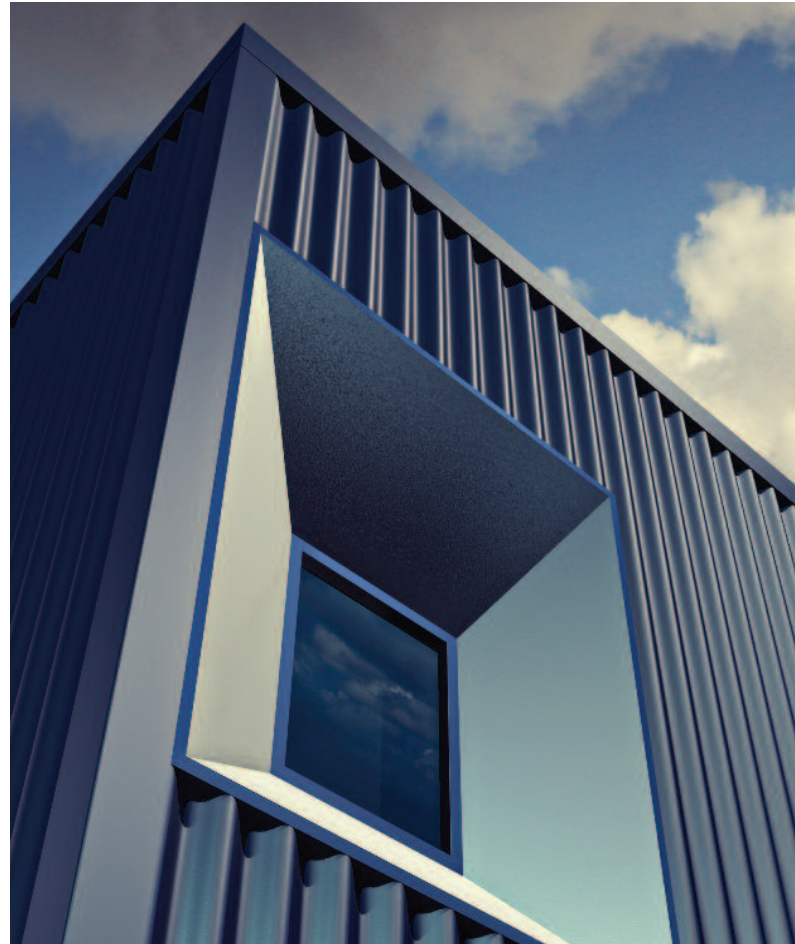
Sandwich panels



Profiled sheets



Tile panels



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Applications

Granite® Storm has been developed primarily for roof and tile panels but can be used for various other applications.

Aesthetics

A deeply textured robust matt finish (below 5 gloss units) available in 10 colours.

Performance

The Granite® Storm finish ensures maximum resistance to scratching both during handling and once installed, underwritten by a 30-year automatic guarantee. Granite® Storm is subjected to a battery of tests in the laboratory and at outdoor exposure sites to guarantee the best possible product performance.

Up to 30 years' guarantee is available, depending on the environment, on a Z275 g/m² substrate or equivalent, against perforation of the metallic substrate. Non-peeling of the paint film is also guaranteed.

Forming

Formability is a key requirement for roofing tiles. Thanks to its highly flexible coating, Granite® Storm allows forming into both new and traditional designs. The paint system remains robust even after punching and forming. Granite® Storm is especially suitable for roofing panels but can be profiled in other ways by the deep drawing process or can be assembled using joining techniques such as clinching, riveting and adhesive bonding.

Colours

Granite® Storm's high performance paint system provides exceptional UV resistance. This exceptional level of resistance for matt colours offers the roof unmatched colour stability. ArcelorMittal's Granite® Storm range of coated steels is available in 10 textured colours. To help you make your choice, the Granite® Storm sample card in the Steel inspiration binder, contains a real, removable sample and shows the full colour range. Further colours are available upon request.

For more detailed specification and aesthetic decisions, A4 samples of any Granite® Storm colour can be requested.

For further information on the technical properties of the different products and durability guarantees, please consult our website.

Technical data

Thickness	0.45 to 1.2 mm
Width	600 mm to 1500 mm (dependent on thickness)
Paint coating	50 µm
Metallic coating	Z275 g/m ² or equivalent
Corrosion resistance	RC5
UV resistance	RUV4
Fire performance	A1 in accordance with EN 13501-1
Guarantee	Up to 30 years

Full technical details are available online. Scan the QR code below.



How to specify this material

Organic coated steel for roofing applications, with paint coating thickness of 50 µm and A1 fire performance, (Granite® Storm by ArcelorMittal or equivalent).

See also
sample card
Steel inspiration



Find out more about
Granite® Storm



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Smaller images, from left: 1 Project: Residential housing Photography: courtesy of Blachprofil 2 SP. z o.o.

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STEEL SPECIFICATION

Granite® Quartz*

Glittering, mineral textures

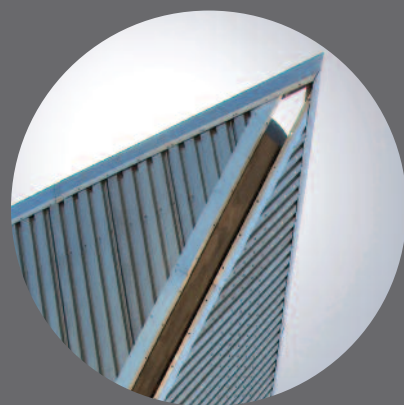
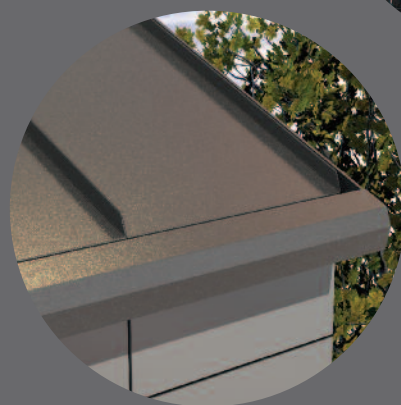


ArcelorMittal

Granite® Quartz has the glinting, scintillating feel of natural minerals, with a variety of facets giving the surface finish a beautiful crystalline look. Light reflecting randomly off crystal faces gives the finish a 'living', ever-changing texture.

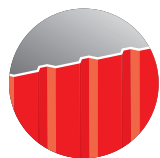
- hard, structured, mineral-appearance surface
- excellent scratch resistance
- a full spectrum of colours - modern and classic - to suit roof and facade projects
- unique new aesthetics, protected by the Office for Harmonisation in the Internal Market (OHIM)*

* Community Design: No. 002347245 in the name of ArcelorMittal Flat Carbon Europe, S.A

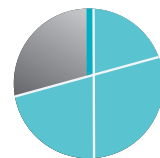




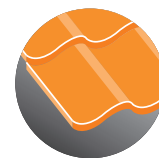
Sandwich panels



Profiled sheets



Cassettes and flat panels



Tile panels



Rendered illustration showing Granite® Quartz Created by CDP for ArcelorMittal - All rights reserved - © 2014

Applications

Granite® Quartz in the Classic colour range has primarily been developed for roofs. The Modern range can be used for facades and several other systems such as sandwich panels and profiled sheet panels.

Aesthetics

A deeply textured matt mineral finish available in 10 colours separated into two distinctive ranges:

Classic range: with 5 common colours, such as red, brown and green used for roofing applications.

Modern range: with 5 colours - white, light grey, dark grey, silver, black - opening new perspectives for facades applications.

Performance

The unique finish of Granite® Quartz ensures maximum resistance to scratching both during handling and once installed. This feature maximises durability.

The product is subjected to a battery of tests in the laboratory and at outdoor exposure sites to guarantee the best possible product performance.

15 years' guarantee is available (depending on the environment) on a Z275 g/m² steel substrate or equivalent, against perforation of the metallic substrate. Non-peeling of the paint film is also guaranteed.

Forming

Granite® Quartz is especially suitable for profiling into roofing panels but can be profiled in other ways by deep drawing processes or can be assembled using joining techniques such as clinching, riveting and adhesive bonding.

Colours

ArcelorMittal's Granite® Quartz range of coated steels is available in 10 textured colours: 5 'Classic' colours and 5 'Modern' colours. To help you make your choice, the Granite® Quartz sample card in the Steel inspiration binder, contains a real, removable sample and shows the full colour range. Further colours are available on request.

For more detailed specification and aesthetic decisions, A4 samples of any Granite® Quartz colour can be requested.

For further information on the technical properties of the different products and durability guarantees, please consult our website.

Technical data

Thickness	0.5 to 1.2 mm
Width	650 mm to 1250 mm (dependent on thickness)
Paint coating thickness	40 µm
Metallic coating	Z275 g/m ² or equivalent
Corrosion resistance	RC3
UV resistance	RUV3
Fire performance	A1 in accordance with EN 13501-1
Guarantee	15 years

Full technical details are available online. Scan the QR code below.



How to specify this material?

Organic coated steel, with a coating thickness of 40 µm and a glittering mineral finish (Granite® Quartz by ArcelorMittal or equivalent).

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There is a wide range of online information available to help you discover more about our products and find solutions for your specific projects.

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2. Find a building system manufacturer

Locate the Building System Manufacturer that best fits your needs.

3. Find technical data and detailed catalogues

Access the full range of ArcelorMittal brochures, catalogues and technical data.

Design and Technical support

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Cover large image: *Project:* Tempe Center for the Arts, Tempe, Arizona, USA
Architects: © Architekton, Tempe and Barton Myers Associates Inc., Los Angeles
Photography: © Peter Robertson p_robertson@bartonmyers.com
Courtesy of Steel Design Publication, Spring 2011

Smaller images, from left: **1** *Project:* Tempe Center for the Arts, Tempe, Arizona, USA
Architects: © Architekton, Tempe and Barton Myers Associates Inc., Los Angeles
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2 Created by CDP for ArcelorMittal - All rights reserved - © 2014

3 *Project:* Dieppe Aquatic Centre Dieppe, New Brunswick, Canada *Architects:* © Dan S. Hanganu, Architectes, Architecture 2000 Inc. en Consortium, Architecture 2000, Dan S. Hanganu, Architecte
Photography: Ron Ward/Times Transcript, Courtesy of Steel Design Publication, Fall 2009

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STEEL SPECIFICATION

Granite® Cloudy

Distinctive aesthetics for traditional and contemporary roofs



ArcelorMittal

Granite® Cloudy is available in 5 distinctive patterned colours. Many of these resemble natural roofing materials such as clay or terracotta. Granite® Cloudy can therefore recreate the random natural appearance of tiled roofs but with all the benefits of durability and performance that pre-painted steel offers.

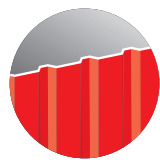
These natural looking finishes mean that Granite® Cloudy can also be successfully specified for facades and other areas of construction, especially where visual integration with the natural surroundings is important.

- attractive finishes with easy assembly and minimal maintenance
- wide variety of colours to match differing roof materials, available with guaranteed reproducibility
- the appealing appearance of traditional tiles but with the strength, colour stability and durability of steel

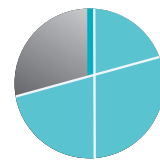




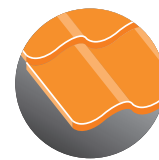
Sandwich panels



Profiled sheets



Cassettes and flat panels



Tiles panels



Project: DistriFill Industrial Building and Offices, Oosterhout Cladding system by SBC HollandGroep
Photography and architect: © Bureau Phi Breda, The Netherlands

Applications

Roof tiles, profiled panels, sandwich panels etc.

Ideal for renovation of pitched roofs, or over-roofing of flat roofs. Its light weight means slimmer, lighter roofing support structures. Can easily be formed into 'roman' style tile profiles which are popular in many southern, sunny-climate countries.

Also used for facades and other building elements.

Aesthetics

Five creative, uniquely patterned, extremely durable, contrasting colours that are stable over time.

Performance

Granite® Cloudy has the beauty of natural stone or clay roofing materials with the performance of steel and is subjected to a battery of tests in the laboratory and at outdoor exposure sites to guarantee the best possible product performance.

10 years' guarantee is available, depending on the environment, on a Z225 g/m² steel substrate or equivalent, against perforation of the metallic substrate. Non-peeling of the paint film is also guaranteed.

Forming

Granite® Cloudy is suitable for profiling and deep drawing processes and can be assembled using joining techniques such as clinching, riveting and adhesive bonding.

Colours

ArcelorMittal's Granite® Cloudy is available in:

- Anticato Dark: a dark brown that gives an attractive depth to the roof
- Anticato Light: a lighter alternative to Anticato Dark
- Terracotta: gives a luminous, warm radiance
- Green & Red: warm and attractive colours

Further colours are available on request.

To help you make your choice, the Granite® Cloudy sample card in the Steel inspiration binder, contains a real, removable sample and shows the full colour range.

For more detailed specification and aesthetic decisions, A4 samples of any Granite® Cloudy colour can be requested.

For further information on the technical properties of Granite® Cloudy and durability guarantees, please consult our website.

Technical data

Thickness	0.45 to 1.5 mm
Width	600 mm to 1500 mm (dependent on thickness)
Paint coating thickness	35 µm
Metallic coating	Z225g/m ² (or equivalent)
UV resistance	RUV4
Corrosion resistance	RC3 in accordance with EN 10169
Fire performance	A1 in accordance with EN 13501-1
Guarantee	Up to 10 years

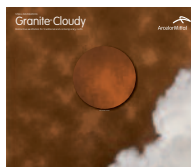
Full technical details are available online. Scan the QR code below.



How to specify this material

Organic coated steel, with natural stone or clay material aspects and with a coating thickness of 35 µm, but without any hexavalent chromium or heavy metals (Granite® Cloudy by ArcelorMittal or equivalent).

See also
sample card
Steel inspirations



Find out more about
Granite® Cloudy



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Cover large image: Project: Private house, Poland Photography: © Francis Crochot, ArcelorMittal Images, from left: 1 Photography: © Philippe Vandenameele

2 Project: DistriFill Industrial Building and Offices, Oosterhout Cladding system by: SBC HollandGroep Photography and architect: © Bureau Phi Breda, The Netherlands

3 Project: Private house, Poland Photography: © Francis Crochot, ArcelorMittal

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STEEL SPECIFICATION

Granite® HFX Cool Aluzinc® HFX

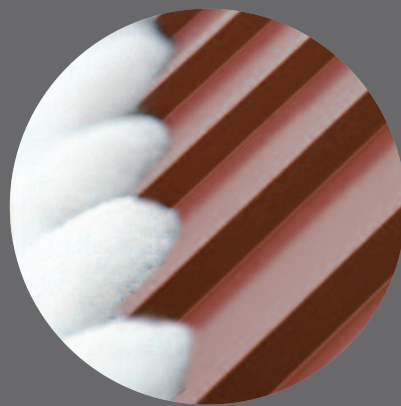


ArcelorMittal

Designed for standing seam applications with excellent formability, even at low ambient temperatures

Granite® HFX Cool organic coated steel and Aluzinc® HFX metallic coated steel are ideal for use with standing seam technology even at low temperature in the cold and wet environments encountered in Northern and Eastern Europe.

- excellent formability even at low temperatures down to -10°C with similar ductility to pure zinc sheets but at an affordable price
- excellent corrosion resistance
- architectural quality thanks to a regular pattern of thin lines created by the standing seam technique
- allows sophisticated shapes to cover curved, convex or concave surfaces including deep drawing
- hidden fastenings
- easy and quick to install, assemble and bend



Granite® HFX Cool and Aluzinc® HFX



Standing seams

Granite® HFX Cool – is an organic coated product

Aluzinc® HFX – is a metallic coated product

Applications

Primarily standing seam roofs, but also rainwater systems (gutters, downpipes and accessories).

Standing seam roofs (or walls) use continuous metal panels running from ridge to eaves with interlocking and overlapping 'seams' that offer both excellent weather resistance and distinctive, unbroken visual aesthetics. HFX products are ideal for these applications because of their ductility and malleability, even at low temperatures, as well as their durability. This allows rapid and effective creation of the seam whether pre-formed off-site, or formed on site.

Aesthetics

To meet the requirements of a broad diversity of building projects in various environments, ArcelorMittal offers two different products suitable for the same end-use applications:

Granite® HFX (High Formability eXtended) Cool

From our paint coated steel family where colour is required to match the environment surroundings – has an optimised, flexible 55-micron paint system combined with a flexible steel grade (DX54D 'minimum recommended' and above) that can withstand deformation and weathering. Granite® HFX Cool comes with up to 20 years' warranty.

Aluzinc® HFX (High Formability eXtended)

From our metallic coating family, with a natural, beautiful silvery metallic spangle – is protected by the 100% chromium-free Easyfilm® E coating, which offers additional corrosion protection during storage and transportation, resistance to fingerprinting and facilitates forming operations (no lubricant is required). Aluzinc® HFX keeps its shiny appearance over time and comes with up to 25 years guarantee

Performance

Granite® HFX Cool and Aluzinc® HFX are subjected to a battery of tests in the laboratory and at outdoor exposure sites to guarantee the best possible product performance.

Granite® HFX Cool – Particularly adapted to harsh climatic environments – mountain or continental climates – with considerable exposure to snow, wind or rain, Granite® HFX Cool is tailor-made for standing seam technologies and can be mechanically or manually folded. Granite® HFX Cool comes with up to 20 years guarantee.

Automatic guarantee for non-perforation of the steel substrate and non-peeling of the paint film up to 20 years in selected environments.

Aluzinc® HFX – Aluzinc® is a unique alloy coating of 55% aluminium, 43.4% zinc and 1.6% silicon – combined with a specific production process and with the DX56D steel grade, which improves deep drawing.



Project: Private housing Photographer: © LINDAB Buildings

Forming

Granite® HFX Cool and Aluzinc® HFX are suitable for profiling and deep drawing processes and can be assembled using joining techniques such as clinching, riveting and adhesive bonding.

Colours

ArcelorMittal's Granite® HFX Cool range of organic coated steels is available in 9 finely textured colours. To help you make your choice, the Granite® HFX Cool sample card in the Steel inspiration binder, contains a real, removable sample and shows the full colour range. Further colours are available upon request.

For more detailed specification and aesthetic decisions, A4 samples of any Granite® HFX Cool colour and Aluzinc® HFX can be requested.

Granite® HFX Cool - technical data

Paint coating thickness	55 µm
Metallic coating	Z275 g/m ² or equivalent
Thickness	0.55 - 2.0 mm
Width	700 mm to 1500 mm
UV resistance	Use of paints and resins RUV4 in accordance with EN 10169
Corrosion resistance	RC5
Fire resistance	A1 in accordance with EN 13501-1
Guarantee	Up to 20 years

Aluzinc® HFX - technical data

Thickness	0.40 to 2 mm
Width	750 mm to 1350 mm (dependent on thickness)
Metallic coating	AZ185 (185 g/m ²) + Easyfilm® E
Fire resistance	A1 in accordance with EN 13501-1
Warranty	25 years' warranty

Full technical details are available on line. Scan the QR code below.



How to specify these materials

Granite® HFX Cool: Organic coated steel thickness 55 µm with high flexibility and fire performance A1, dedicated to standing seam applications (Granite® HFX Cool by ArcelorMittal or equivalent).

Aluzinc® HFX: Metallic coated steel, 55% aluminium 43% zinc, with high flexibility and fire performance A1, dedicated to standing seam applications (Aluzinc® HFX by ArcelorMittal or equivalent).

See also
sample card
Steel inspiration



Find out more about
Granite® HFX Cool
Aluzinc® HFX



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Cover large image: Project: Private housing Photographer: © LINDAB Buildings
Smaller images, from left: 1 Project: Lycée de Montmorillon Photography: © Savoie Métal Toiture
2 Photography: © Philippe Vandenameele, 3 Project: Private housing Photography: Courtesy of France PRIVÉ SA – Styl'inov®

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STEEL SPECIFICATION

Granite[®] Rain

Coated both sides, a robust system for rainwater applications



ArcelorMittal

Granite[®] Rain is the most cost-effective compromise between aesthetics and robustness available on the market today, and combines guaranteed durability with ease of use, flexibility and visual appeal.

- strength of steel combined with a flexible double-sided paint system
- protective paint barrier gives excellent weather resistance
- exceptional formability even at low ambient temperatures (down to -10°C)
- a rich palette of colours with a grained finish
- up to 15 years' guarantee





Rainwater systems



Photography: © Philippe Vandenameele

Applications

Rainwater systems: gutters, downpipes, elbows, internal or external corners, outlets, rainwater diverters etc.

Aesthetics

Granite® Rain is a perfect combination of form and function, elevating rainwater systems from a 'necessary evil' to a building-enhancing feature that is durable, efficient at water removal and attractive at the same time.

Performance

The Granite® Rain range comprises two products, Granite® Rain HDS which offers standard levels of durability and Granite® Rain HDX, which offers superior durability and an extended guarantee of up to 15 years.

Forming

Granite® Rain can be processed by forming and deep drawing without damaging the top surface, and can be joined using techniques such as clinching, riveting and adhesive bonding.

Colours

Granite® Rain comes in a variety of colours to suit every taste and every budget. Moreover, knowing that no two projects are ever the same, customisation is also possible. All colours have an artistically grained aesthetic texture and are subject to ArcelorMittal's common quality assurance system. To help you make your choice, the Granite® Rain sample card in the Steel inspiration binder, contains a real, removable sample and shows the full colour range. Further colours are available upon request.

For more detailed specification and aesthetic decisions, A4 samples of any Granite® Rain colour can be requested.

For further information on the technical properties of the different products and durability guarantees, please consult our website.

Technical data

Thickness	0.5 to 2.0 mm
Width	660 mm to 1500 mm (dependent on thickness)
Paint coating thickness	35 µm for Granite® HDS/55 µm for Granite® HDX
Metallic coating	Z275 g/m ² or equivalent
UV resistance	RUV4 - Granite® Rain HDX RUV4 - Granite® Rain HDS
Corrosion resistance	RC5 - Granite® Rain HDX RC4 - Granite® Rain HDS
Fire performance	A1 in accordance with EN 13501-1
Guarantee	Up to 15 years

Full technical details are available online. Scan the QR code below.



How to specify this material?

Organic coated steel for rainwater applications with a coating thickness of 35 µm or 55 µm and fire performance A1, (Corrosion resistance RC5, Granite® Rain HDX 55 µm by ArcelorMittal or equivalent).
(Corrosion resistance RC4, Granite® Rain HDS 35 µm by ArcelorMittal or equivalent).

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Smaller images, from left: 1,2 and 3 Photography: © Philippe Vandenameele

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STEEL SPECIFICATION

Magnelis®

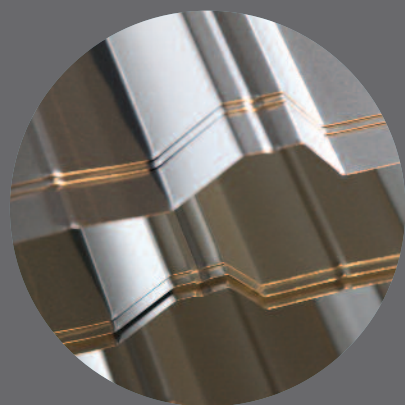
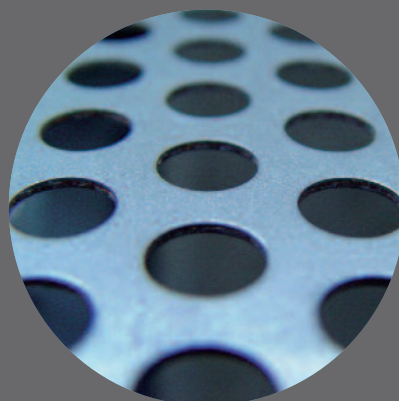
Exceptional protection – even on cut edges – in the harshest environments



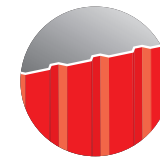
ArcelorMittal

Magnelis® is simply an exceptionally versatile metallic coated steel. It provides amazing levels of surface and cut-edge corrosion protection even in the most hostile of environments.

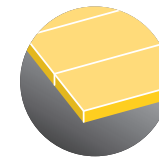
- excellent corrosion resistance – at least 3 times better than galvanised steel in external applications
- excellent forming behaviour thanks to a lower friction coefficient to galvanised steel and very good adhesion of Magnelis® coating
- complete edge protection from the self-healing properties of Magnelis® on cut edges
- more cost-effective than batch galvanised steels, due to simple manufacture
- lower zinc run-off than galvanised steel: better for the environment
- up to 20 years warranty for roofing and cladding in marine environments and up to 25 years for inland applications (more than 2000 m from the coast)



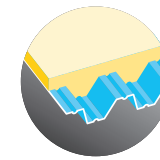
Magnelis®



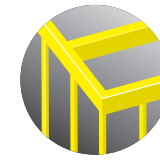
Profiled sheets



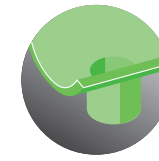
Decking



Composite flooring



Framing



Rainwater systems

The remarkable corrosion resistance of Magnelis® allows it to be used across a range of structural applications (light steel framing, ventilated facade supports, composite floors, solar system supports), but also for roofing and cladding in corrosive environments such as coastal buildings, agricultural buildings and water transport systems.

For civil engineering applications, Magnelis® offers a cost effective substitute for batch galvanised steel and in the transport sector Magnelis® is widely used for safety barriers, lighting poles, road signs, sound barrier fences and many other items.

In fact, wherever it's used, Magnelis®, guarantees tough, good-looking, cost-effective, long-life solutions.

Magnelis® is an exceptional, metallic coated steel product providing surface protection in a variety of applications against long-term wear and tear. Tough, self-healing and cost-effective, it offers superior corrosion resistance and versatility in a surprising range of constructions.

Left Photography: © ETIENjones/Shutterstock.com

Right Photography: © DSBfoto/Shutterstock.com



Project: Private housing, Montpellier, France Courtesy of: Profil du Futur
Photography: © Christophe Demonfaucou



Project: Centre de Maintenance Cargolux, Luxembourg-Findel Architect: © Jean-Luc Dupanloup, chef de projets, Jean-François Schmit Architectes Photography: © Gaston Bergeret



Applications

Magnelis® has a wide range of applications:

- Light steel framing structures
- Rainwater systems
- Composite floors
- Purlins
- Structures for solar systems
- Roof structures, particularly for harsh environments such as marine and agricultural

Aesthetics

Magnelis® has a natural dark grey, spangle-free smooth aspect. Magnelis® is available with a standard environmentally friendly E-Passivation® (translucent CrVI-free temporary protection) or can be oiled on request.

Performance

Magnelis® is produced on a classic industrial hot dip galvanising line, but dipped in a molten bath with a unique metallic chemical composition of zinc with 3.5% aluminium and 3% magnesium. The 3% magnesium is crucial as it creates a stable and durable layer across the entire surface and gives a far more effective corrosion protection than coatings with a lower magnesium content. As such, ArcelorMittal's Magnelis® offers significantly superior performance than alternative European products.

Superior corrosion resistance

The destruction of coating that occurs in an ammonia-rich environment is seven times less with Magnelis® than with a standard zinc coating.

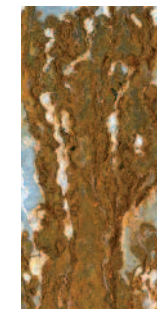
In addition, Magnelis® guarantees a longer-lasting, active coating protection over time. In highly alkaline environments (pH between 10 and 13), Magnelis® demonstrates superior corrosion resistance compared to other metallic coatings.

Self-healing properties

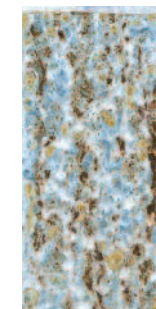
The secret of Magnelis® lies in the thin, zinc-based protective film (containing magnesium and aluminium) that is formed across the entire metal surface and that gives Magnelis® its self-healing property.

Magnelis® makes it almost impossible for the environment to penetrate. It blocks corrosion, and not only at the surface, but also on the uncoated edges, where a Magnelis® film will gradually produce specific compounds which gradually cover and seal the unprotected surface, preventing any corrosion.

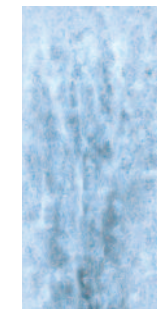
Salt spray test



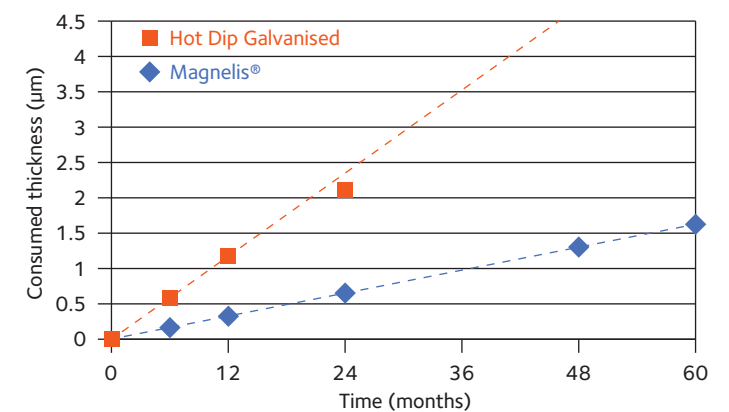
Hot dip galvanised
20µm after 6 weeks



Post galvanised 85µm
after 12 weeks



Magnelis® 20µm
after 34 weeks



Corrosion rate of Magnelis® versus galvanised product. Outdoor exposure tests for 5 years in Brest, France, in a high-chloride environment-site C5M (steel).

Technical data

Product	Magnelis®
Thickness	0.45 mm to 6.00 mm
Max. coil width (dependent on thickness)	Up to 1680 mm
Metallic coating thickness	From ZM90 (7 µm) to ZM310 (25 µm)
Fire performance class	European standard (EN 13501-1) A1 French standard (FD P92-507) M0 British standard (BS 476) AA
Warranty	Up to 25 years

Certifications and compliance DIBt Z-30.11-51, CSTB, SP (SITAC)
Full technical details are available online. Scan the QR code below.

Warranty

Up to 25 years for ZM310:
 • inland roofing and facade applications (more than 2000 m from the coast)
 • solar structure applications
 • light structural components – dependent on application and environment

Up to 20 years:
 • roofing and facade applications in marine environments

We are able to grant warranties for specific applications or environments. Please consult ArcelorMittal for further details.



How to specify this material

Metallic coated steel, coating made from zinc, 3.5% aluminium, 3% magnesium, thickness coating from 7 µm to 25 µm depending on the environment (Magnelis® by ArcelorMittal or equivalent).



Flooring

Composite floor systems, made with steel, serve as self-supporting formwork, resisting construction loads and concrete weight.

They are flexible and adaptable to any kind of new construction or renovation and can be used for floors in offices, housing, car parks, hospitals etc., allowing large spans and reduced floor thicknesses while maximising interior spaces.

Metallic coated steel, Magnelis®, with its excellent corrosion performance when in contact with concrete or in high alkaline atmosphere, is the ideal solution for durable, long-lasting flooring.

Photography: © 06photo/Shutterstock.com



Framing for buildings

Lightweight steel sections can be rapidly assembled off-site or on site to form structural internal and external wall panels or entire building frameworks. These can be combined with structurally efficient floor and roof solutions and provide stability and integrity to the building, eliminating the need for a steel or concrete primary frame.

Magnelis® will last much longer than steel with traditional coatings such as hot dip galvanised. Proven by outdoor tests, Magnelis® offers excellent protection, even for edges and perforations thanks to its inbuilt self-healing properties.

Photography: Courtesy of Profil du Futur



Framing for photovoltaic systems

To ensure adequate return on their investment, developers of photovoltaic installations need the supporting structure to remain viable for as long as possible.

The unique composition of the Magnelis® coating guarantees the integrity of steel solar structures. Thanks to the presence of 3% magnesium, the coating protects the steel for up to 25 years in normal locations.

Photography: © Moomsabuy/Shutterstock.com

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sample card
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Magnelis®



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STEEL SPECIFICATION

Interior aesthetics

xcellook® | xcelcolour® | xceldesign® | Estetic® Mat | Estetic® Tex



ArcelorMittal

Collections of steel that add visual impact, texture, colour and elegance to a range of applications and constructions for interior projects.

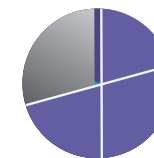
- bespoke patterns, finishes and designs
- the authentic, contemporary elegance of steel
- high impact resistance for busy, public areas
- stain resistant and easy to clean
- longevity and durability



Interior aesthetics



Ceilings and partitions



Cassettes and flat panels

From pure function to perfect form and from impact-resistant robustness to elegant aesthetics, our interior steel ranges offer design scope, durability, performance and the opportunity to take a different approach and add a new dimension to the design of interiors.

ArcelorMittal's interior aesthetic steel can be used for everything from heavily trafficked lift interiors or hallways that take a pounding every day; to refined unique and bespoke, textured, patterned and printed panels that are practically individual works of art.

With our aesthetic interior products you can add fluid formability, tailor-made design and even unique patterns, pictures or logos to the clean, durable, functionality of steel.



ArcelorMittal

Left Project: Centre Acier, Flémalle, Belgium Photography: © Pascal Schyns

Right Project: Metal Structures Centre, Ghent Photography: © Jeroen Op de Beeck



Project: Centre Acier, Flémalle, Belgium Photography © Pascal Schyns



Project: Steel ceiling suspension systems by Saint-Gobain API, Photography © Henk Merjenburgh



xcellook®

The aesthetics of stainless steel affordable for all projects

An electrogalvanised brushed steel with a transparent coating and a natural metallic appearance available in six surface finishes. xcellook® is designed for interior applications where aesthetic quality is key, and is an attractive alternative to stainless steel or aluminium.

Applications

xcellook® is suitable for profiling and deep drawing processes and can be assembled using joining techniques such as clinching, riveting and adhesive bonding, so is ideal for walls, lifts, ceilings, lighting etc. and heavily trafficked areas like airport terminals, railway concourses and other transport hubs.

xcelcolour®

Smooth metallic finishes for advanced designs

xcelcolour® has a unique satin metal look - available in two colours, bronze and anthracite - achieved by a very specific combination of roughness and a thin coloured but transparent, organic coating.

Applications

The beautiful finish is ideal for a variety of indoor applications, such as decorative walls, reception desks and architectural objects.

xceldesign®

Bespoke finishes, designs and patterns

xceldesign® offers a steel solution tailored to your design specifications. Any pattern, picture or logo can be produced on the steel surface.

xceldesign® uses electron beam texturing (EBT). Thanks to the deterministic nature of this technology, the contours of all patterns can be perfectly controlled. In fact, EBT can be compared to a giant laser printer, with tiny craters being created rather than ink dots.

Applications

Applications range from quality labelling, such as logos or watermarks, to purely aesthetic, decorative finishes.

Once the design is chosen, xceldesign® is perfect for all interior applications, both for larger constructed areas - such as a corporate atrium featuring a company logo or specific design - to smaller areas or objects, such as a desk.

Estetic® Mat

Light matt finish with excellent resistance to marking

Specifically developed for interior building industry applications, this product range meets all requirements in terms of aesthetic quality (appearance and gloss) and properties such as flexibility, coating adhesion, corrosion resistance etc. and is especially suited to interior ceiling applications.

Applications

Metal ceilings (capping, ceiling tiles, perforated panels, accessories etc), internal panels, doors.

Estetic® Tex

A grained, anti-scratch finish for robust usage

The very hard surface robustness of Estetic® Tex makes it the ideal material choice for walls in areas with intensive public activity such as airports or subways. The attractive aesthetics remain intact even after years of use. The scratch-resistant surface is particularly suited to the cladding of walls, hallways, furniture, heating and ventilation applications.

Applications

Metal furniture, shelves and shelving units, air conditioners, radiators, casings etc.

Interior aesthetics

Technical data

Product	xcellook®	xcelcolour®	xceldesign®	Estetic® Mat	Estetic® Tex
Thickness	0.44 - 1.5 mm	0.45 - 1.5 mm	0.40 - 1.5 mm	0.17 - 3.0 mm	0.5 - 3.0 mm
Max. coil width (dependent on thickness)	700 - 1500 mm	800 - 1500 mm	800 - 1500 mm	700 - 1500 mm	700 - 1500 mm
Paint coating system	10 to 15 µm	9 µm	9 µm	25 µm	35 µm
Metallic substrate	ZE 75/75/ certificate: RoHS compliant	Z140 or equivalent	Z140 or equivalent	Z100 or equivalent	Z100 or equivalent
Fire performance (all products)	European standard (EN 13501-1) A1, French standard (FD P92-507) M0, British standard (BS 476) AA				
VOC emission level (all products)	Close to zero				

Full technical details are available online. Scan the QR code below.



How to specify this material

For interior aesthetics the products will be coated: from 10 µm to 15 µm (xcellook® by ArcelorMittal), or 9 µm (xcelcolour®/xceldesign® by ArcelorMittal), or 25 µm (Estetic® Mat by ArcelorMittal), or 35 µm (Estetic® Tex by ArcelorMittal).

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Cover large image: *Project: Metal Structure Centre, Zwijnaarde Technologiepark, Belgium*

Architect: © Patrick Lefebure, Archipl Architecten Photography: © Jeroen Op de Beeck

Smaller images, from left: **1** *Project: Centre de Maintenance Cargolux, Luxembourg-Findel*

Architect: © Jean-Luc Dupanloup, chef de projets, Jean-François Schmit Architectes

Photography: © Gaston Bergeret

2 *Project: Steel ceiling suspension systems by Saint-Gobain API Photography: © Michael van Oosten*

3 *Project: Centre de Maintenance Cargolux, Luxembourg-Findel Architect: © Jean-Luc Dupanloup, chef de projets, Jean-François Schmit Architectes Photography: © Gaston Bergeret*

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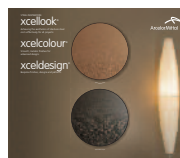
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