



# Granite<sup>®</sup> HDXtreme

Extremely beautiful,  
extremely durable

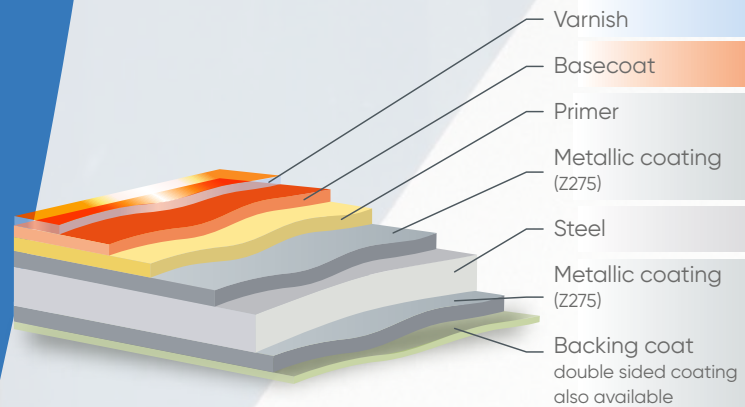


# Granite<sup>®</sup> HDXtreme

Granite<sup>®</sup> HDXtreme is a uniquely beautiful, resilient, and sustainable pre-painted steel for outdoor and indoor applications. It combines best-in-class UV and corrosion protection with durability and a large colour palette to make any building unique.

Granite<sup>®</sup> HDXtreme is the best-in-class organic coated steel on the market. It is composed of several paint layers which provide a coating of 70 to 75 µm depending on the chosen finish.

Granite<sup>®</sup> HDXtreme has been developed to ensure a long durability performance in very severe environments including coastal, with a unique range of colours and surface finishes.



Each layer performs a different but integral function. The layers include:

- A thick varnish which increases the durability of the coating, its surface robustness, and UV weathering performance.
- A basecoat which provides the colour and offers much better durability compared to classical coatings.
- A thick primer layer which plays a key role in corrosion protection. This layer ensures the top coat adheres strongly to the underlying metallic-coated steel.
- Granite<sup>®</sup> HDXtreme is available on a galvanised (Z) steel. The coating weight is 275 g/m<sup>2</sup>.
- A backing coat which is chosen based on the end use for the coated steel. The backing coat protects the steel substrate from corrosion and mechanical damage while providing a surface suitable for foam adhesion (if required by the final application).

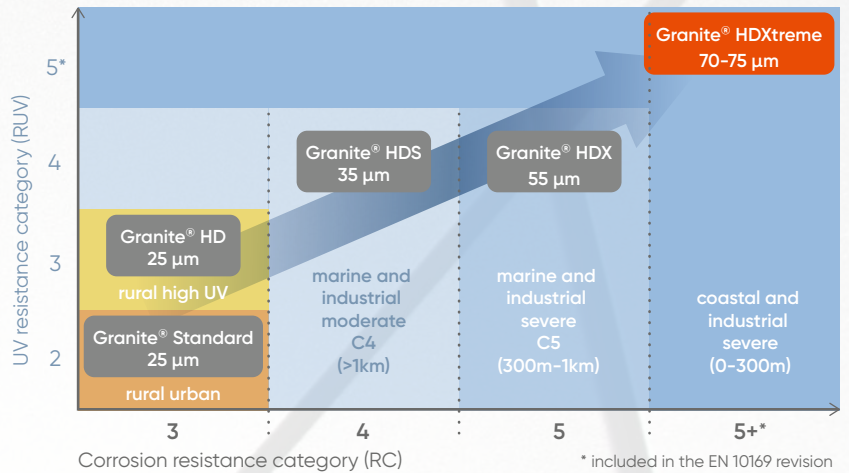


Modernity and functionality were key requirements in the design of the Bodega Terminal complex (Santander, Spain)



# Granite<sup>®</sup> HDXtreme combines best-in-class UV and corrosion protection

grained, sparkling & matt finishes durability & surface robustness
colour & UV resistance
protection against corrosion
structural behaviour (including high strength)
protection against corrosion



## Requirements for natural outdoor corrosion resistance tests (Extract from revised EN 10169)

Corrosion resistance category	Test duration (years)	Average edge delamination (mm)
RC2	1	≤ 10
RC3	2	≤ 5
RC4	2	≤ 2
RC5	2	≤ 2
RC5+	4	≤ 2



ArcelorMittal's weathering site in Brest (France) is managed by the French Institute of Corrosion  
© ArcelorMittal

## The most durable coating for construction

Granite<sup>®</sup> HDXtreme offers best-in-class corrosion resistance. This has been fully tested by ArcelorMittal's Global R&D experts under extreme corrosion and weathering conditions. Tests have been conducted both in the laboratory, and at outdoor exposure sites across the world.

Granite<sup>®</sup> HDXtreme is classified RC5+ according to the new version of the EN 10169 standard for organic coated steels. Granite<sup>®</sup> HDXtreme will ensure the durability and sustainability of facades and roofs, even in close proximity to the sea.

## Tested with accelerated corrosion tests and natural weathering

A battery of corrosion tests has been conducted at ArcelorMittal's laboratories to predict the behaviour of Granite<sup>®</sup> HDXtreme in different environments. This includes coastal and very humid locations. Tests performed include salt spray tests (SST) and condensation resistance tests (QCT).

Specific tests which imitate the effect of acid rain and chemicals have also been conducted. The tests also evaluated the ability of corrosion inhibitors in the Granite<sup>®</sup> HDXtreme coating to block anodic and cathodic reactions on edges and scribes. Permeability resistance and the effectiveness of the topcoat as a barrier to corrosion have also been evaluated.

Although they are a good guide to the behaviour of the product in-use, accelerated laboratory tests do not fully represent real-life conditions in all environments. For this reason, ArcelorMittal is also carrying out permanent natural weathering tests in a range of locations around the world.

## Three different aesthetics – over 50 colours!

Granite® HD Xtreme is available in three different aesthetic finishes:

**Satin (X):** a grained satin finish available in either 15 or 30 gloss units (GU) on a 75 µm coating.

**Matt (M):** a fine wrinkle finish on a 70 µm coating. The Matt finish has a gloss of less than 10 GU.



**Sparkling (S):** a unique grained and metallic finish on a 75 µm coating. The Sparkling finish has a gloss of 30 GU.

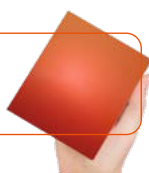
Physical samples can be obtained on request.

[Link to order samples](#)



### Sample webshop

Order your physical samples



The full Granite® palette is available in the Satin (X) finish. A selection of colours, chosen by leading designers and architects, has been made available in the Matt (M) and Sparkling (S) finishes. More colours may be added later or on demand.

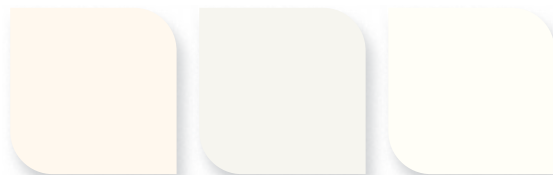
An example of the three distinct finishes in the same colour (Jet Black):



## Satin colours 'X'

75 µm, (15/30 GU), grained

### Category 1: Classic light



*Cream*  
G901X

*Grey white*  
G902X

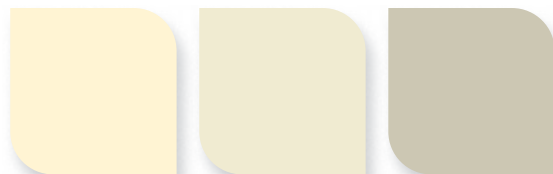
*Pure white*  
G910X



*Traffic white*  
G916X

*Blanco pirineo*  
G961X

### Category 2: Classic medium



*Light ivory*  
G115X

*Crema bidasoa*  
G122X

*Pebble grey*  
G732X



*Light grey*  
G735X

*Silk grey*  
G751X

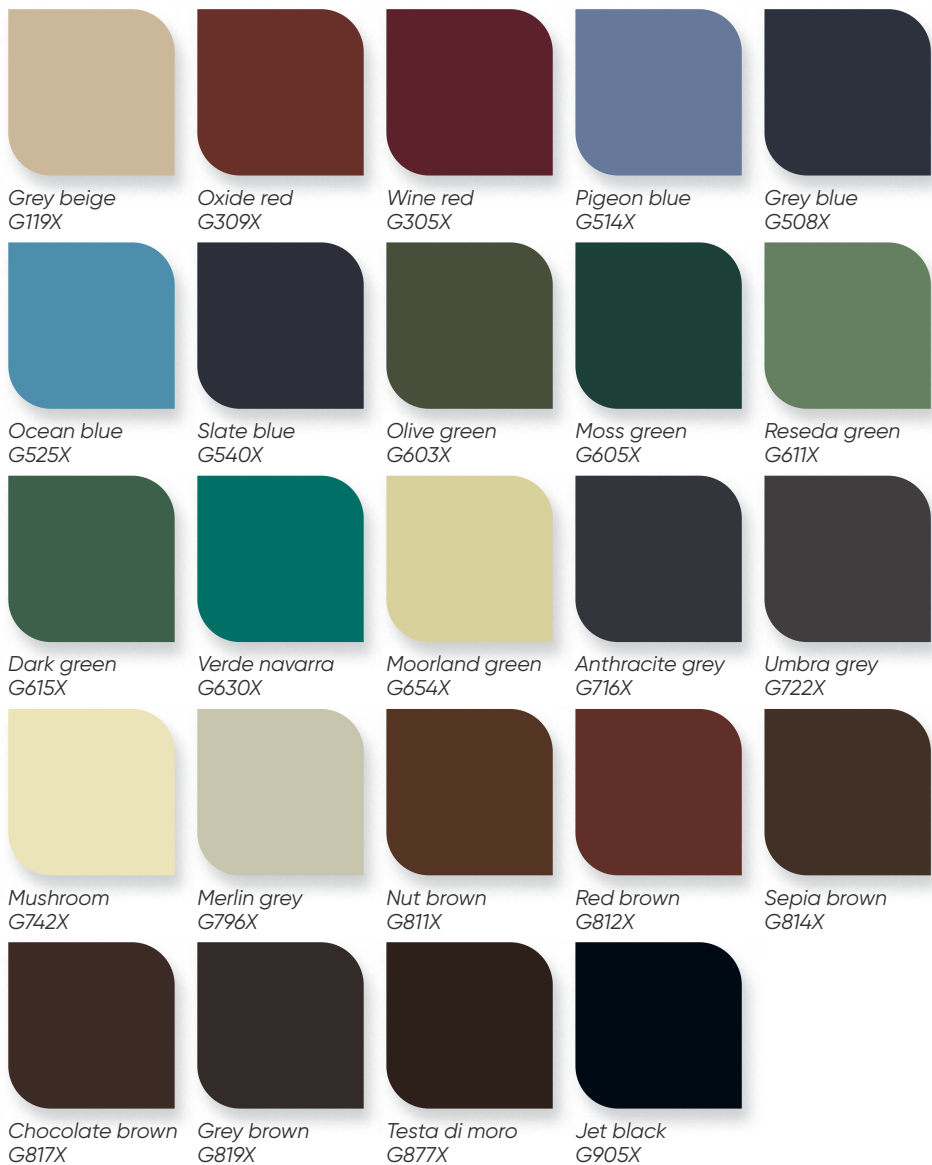
*Goosewing grey*  
G795X



*Bianco grigio*  
G973X



### Category 3: Classic dark



### Category 4: Magic saturated



### Category 5: Magic metallised



### Matt colours 'M'

70 µm, (< 10 GU), fine wrinkle



### Sparkling colours 'S'

75 µm, (30 GU), grained



## UV weathering resistance

Granite® HDXtreme is rated RUV5 under the new version of EN 10169. This is the highest UV resistance category in the standard. It indicates that the paint system will maintain its colour and gloss over time.

To understand how Granite® HDXtreme resists UV corrosion in a variety of environments, the pre-painted steel has been subjected to a battery of accelerated tests in our laboratories. UV weathering resistance is evaluated by exposing a pre-painted sample of Granite® HDXtreme to accelerated UV, humidity, and temperature variations for 4,000 hours.

The accelerated tests are complemented by natural outdoor exposure tests which have been carried out at locations around the world.

### UV resistance testing requirements in natural and artificial conditions (Extract from revised EN 10169)

Requirements	UV resistance category					
	RUV2	RUV3	RUV4	RUV5		
Test duration, natural exposure (years)	2	2	2	4		
Test duration, artificial UV radiation (hours)	2000	2000	2000	4000		
Maximum colour change ΔE before and after the test (CIELab units)	5	3	3	2	3	2
Minimum retained gloss after the test (RG), %	30	50	60	80	80	

## Sustainability

Like the full Granite® product range, the long life of Granite® HDXtreme will be beneficial throughout the lifecycle of a building. And when the steel reaches the end of its useful life, it is 100 percent recyclable.

Granite® HDXtreme can be combined with ArcelorMittal's high strength steels (HSS) so architects and designers can reduce steel thickness and create lighter structures. This also helps to lower the carbon footprint of the building.

ArcelorMittal has published an Environmental Product Declaration (EPD) for the entire Granite® range.

[link to Granite® EPD on our website](#)

ArcelorMittal Europe is committed to reducing its CO<sub>2</sub> emissions by 35% in 2030, and to be carbon-neutral in 2050. To achieve this, we have launched an ambitious plan of investments and created an umbrella brand: XCarb®. In 2022, we began to offer a range of low-CO<sub>2</sub> footprint steel grades known as XCarb® recycled and renewably produced. We also enable our customers to report an equivalent reduction in their Scope 3 emissions in the form of XCarb® green steel certificates.

More about XCarb®: [europe.arcelormittal.com/sustainability/xcarb/xcarb-introduction](https://europe.arcelormittal.com/sustainability/xcarb/xcarb-introduction)

## Automatic guarantees for Europe

With more than 50 years of experience in Europe, ArcelorMittal has had the opportunity to analyse how our products behave in different regions and climatic conditions. Our organic coated steels have become the benchmark for pre-painted metals in terms of quality, durability, and sustainability. Architects, building owners and contractors can be sure they are specifying the right product for their projects when they select an ArcelorMittal pre-painted steel. And like the Granite® range, they come with a full guarantee.

### Up to 40 years automatic guarantee

Granite® HDXtreme is guaranteed in all types of areas in Europe. The Satin (X) and Matt (M) colour series can even be used in highly corrosive seafront locations less than 300 metres from the water. This makes Granite® HDXtreme the universal answer for all projects, whatever the environment.

The guarantee is automatic in Europe. As a direct customer, you are automatically covered when you buy Granite® HDXtreme. There is no need to register or complete a questionnaire. That gives you assurance that all your projects are systematically protected.

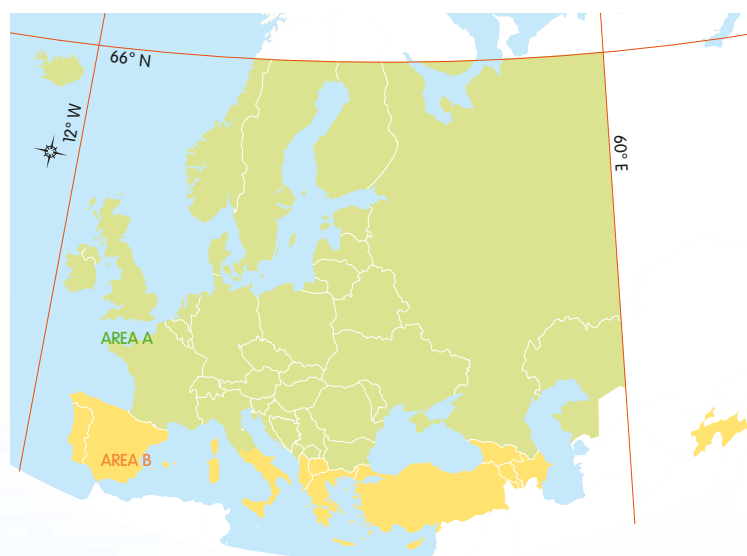
The Granite® HDXtreme guarantee covers:

- Non-perforation of the sheet metal and non-delamination of the paint film
- Aesthetic properties such as gloss and colour
- Edge peel guarantee
- Installation of solar (PV or thermal) modules on the roof.

ArcelorMittal's guarantee has the same duration, regardless of whether the Granite® HDXtreme is used for roofing or facades.

The guarantee can be granted worldwide on request.

*Please contact us.*



#### AREA A - Northern Europe:

Below 66° north parallel  
East of 12° west longitude  
West of 60° east longitude  
\* Guarantee extended to Iceland

#### AREA B - Southern Europe:

Portugal, Spain, Corsica, Albania, Greece, Republic of Macedonia  
The southern part of Italy (the Lazio and Abruzzo regions and below)  
\* Guarantee extended to Armenia, Azerbaijan, Georgia, Tajikistan and Turkey



## Applications

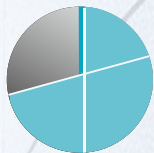
Granite® HD Xtreme is usually recommended for roofing and cladding applications made from sandwich panels or profiled sheets. It is also suitable for the manufacture of flashings and accessories, cassettes, flat panels, doors, solar shading, fins, blades, and narrow elements.



**Sandwich panels**  
Composite panels for insulated roofs and facades



**Profiled sheets**  
Panels or sheets with curved or trapezoidal profiles



**Cassettes and flat panels**  
Cassette panels systems for metal support systems and other flat panel types



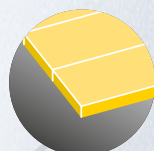
**Solar shading**  
Brise-soleil and other solar shading system components



**Fins, blades and narrow elements**  
Specially formed narrow elements for a range of applications



**Tile panels**  
Profiled and stamped panels replicating traditional roof tile shapes



**Decking**  
Formed profiles for short, medium and long-span decking

## The best alternative to plastisol

Granite® HD Xtreme offers much better performance than plastisol paints made with PVC. It covers many aspects, such as durability, sustainability, colour stability, pattern and colour range, maximum operating temperature and fire response performance. This advantage is particularly relevant for sandwich panels due to their high surface temperature.

## Backing coat recommendations

The coating on the reverse side of the steel must be properly selected to suit the application. At a minimum, ArcelorMittal recommends you use BFP12. This 12 µm backing coat offers adequate protection against corrosion for most construction elements. The following table has specific recommendations for different environments and construction applications:

Environment	Construction component	BOTTOM side selection TOP / BOTTOM
Outdoor environment	Sandwich panel roofs and facades (C2 to C5)	Granite® HD Xtreme / BFP12
	Roofing, cladding profiles, roofing tiles and cassettes (C2, C3, C4)	Granite® HD Xtreme / Access® A, Estetic® Flex
	Roofing or cladding profiles (C5)	Granite® HD Xtreme / Estetic® Standard Granite® Standard, Granite® Flex
	Cassettes and blades (C5) ≥ 1 mm	Environmental questionnaire
Indoor environment	Roofing or cladding single skin profile & sheet with aggressive indoor ambiance (A4, A5)	Granite® HD Xtreme / Granite® HD Xtreme
	Liner with aggressive indoor ambiance (A4, A5)	Granite® HD Xtreme / BFP12

## Solar energy-generation systems (photovoltaic and thermal)

Granite® HD Xtreme can support solar panels over the entire life of the photovoltaic (PV) or thermal system. The coating can withstand dead and climatic loads as well as the effects of corrosion and UV over time. After some years, the Granite® HD Xtreme guarantee is not affected if a solar module is installed on a roof, as long as the work is carried out by a fully qualified professional.



# Granite<sup>®</sup> HD Xtreme

guarantee **40** years

Extremely beautiful, extremely durable  
free of chromates and heavy metals

Description	Organic coating thickness <sup>(1)</sup>	70 and 75 microns, depending on the finish
	Steel thickness	0.30 to 1.8 mm
	Steel width	660 to 1500 mm (above upon request) Slit coils and sheets are available from leading steel service centres. Contact us with any request.
	Colours & appearance	Colour palette Satin (15 and 30 GU) grained, Matt (<10 GU) fine wrinkle, Sparkling (30 GU) grained.
Performance	Adhesion of the coating (T-bend)	≤ 1 T
	Resistance to cracking on bending (T-bend)	≤ 1.5 T
	Impact resistance	18 J
	Clemen scratch resistance	≥ 3.5 kg
	Corrosion resistance: • Salt spray test (SST) • Corrosion resistance category	1000 hours RC5+
	Condensation resistance: • QCT test	1500 hours
	Corrosion protection (interior) category	CPI4
	UV resistance: • QUV (UVA + H <sub>2</sub> O) test (4000 hours) • UV resistance category	ΔE ≤ 2; GR ≥ 80% RUV5
	Fire behaviour classification (EN 13501-1)	A2
	Remarks	<p>These performance characteristics refer specifically to metallic coating Z275 (guaranteed minimum). If any product (film, oil, foam, glue, paint etc) is to be applied after coil delivery, compatibility with the coating needs to be checked first. Although we take great care to reproduce the same aesthetic aspect on each coil, ArcelorMittal cannot guarantee the visual consistency from one single order item to another. Consequently, you need to consider placing one single order for one building; standard samples can only serve as a guide.</p>

(1) Nominal value, tolerance according to EN 10169

## Find out more

For the full information on Granite<sup>®</sup>,  
visit the website page at

[industry.arcelormittal.com/granite](https://industry.arcelormittal.com/granite)  
[constructalia.arcelormittal.com](https://constructalia.arcelormittal.com)

Or contact your local account manager  
or technical representative.

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