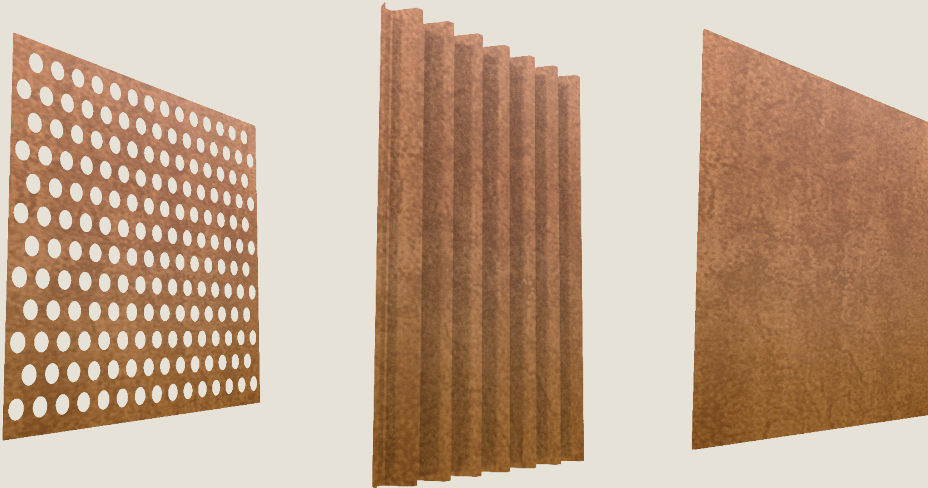


# Indaten®



Product: **Indaten®**  
Application: Facade

## Product description: properties

Indaten® is a structural steel with excellent resistance to atmospheric corrosion, thanks to the development of a protective and adhesive patina evolving with time and environment. Indaten® is a range of steels with improved resistance to atmospheric corrosion. These grades are fine-grain, high-strength structural steels that have been optimized to give improved processing and in-service performance.

- Improved resistance to atmospheric corrosion
- High strength resistance
- Good formability

## Advantages

With their characteristic colour, Indaten® steels are used in architectural projects either to harmonize with the environment or to create a pleasing contrast with other materials, such as stainless steel. When used uncoated and exposed to bad weather, an oxide layer develops on the steel surface, forming a purplish-brown, finely grained patina that bonds very strongly to the steel and protects it. If the patina is damaged, the steel re-oxidises, thus repairing the patina and maintaining the protective barrier.

Indaten® can also be coated (paint, metallic coatings etc). In the case of coated parts, the protective layer prevents rust propagation under the paint layer. Experience has shown that the adhesion of organic coatings on Indaten® is superior to bonding on other carbon steel grades.

## BIM object content

ArcelorMittal Europe – Flat Products digital material pack includes:

### Folder: “Material Files”

Autodesk® Revit® model – .rvt file (v. 2015)

Graphisoft® Archicad® model – .aat file to import by using of the Attribute Manager

Chaos Group® V-Ray® material: .vrmat and .vismat files to import to the V-Ray render engine (Materials Browser)

Autodesk® Maya® material: .mb file to import to the Materials Editor

Simple texture: .jpg file to use in a software without an advanced rendering engine (sample size 10x10 cm)

Additional files attached to the digital material:

### Folder: “Examples of applications on building elements”:

Includes short animations (mp4) with presentation of the material on different building elements: flat panel, perforated sheet, micro-ribbed panel, ribbed profile.

### Folder: “Examples of applications on the buildings”

Includes: 3 views with different zoom factors of the same building with ArcelorMittal Europe – Flat products material added to the external elevation.

The correct way of using ArcelorMittal Europe – Flat Products digital materials has been optimized to typical and very simple procedures suitable for design environments.

To use ArcelorMittal Europe – Flat Products digital materials the user needs only enter files by using of common ways described in the software documentation.

Below, there is the video example of using ArcelorMittal Europe – Flat Products material in the Autodesk Revit environment (Autodesk® Revit® 2016, examples with built-in Autodesk® Revit® render engines and Chaos Group® V-Ray® engine which requires additional installation in the Autodesk® Revit® environment).

<http://constructalia.arcelormittal.com/en/tools/bim>

## Recommendation for optimal use

Recommendation for optimal use

By using of our BIM files (Autodesk® Revit®, Graphisoft® Archicad®) or files including settings dedicated for render engines you can easily apply our materials to your building elements.

In design environments for which they were prepared, just load attached BIM files or settings files.

Due to existing of the many rendering engines you can also define your rendering parameters manually. Below is the list of suggested settings for Indaten® / Facade

Suggested settings of rendering material:

1. DIFFUSE:

Enclosed texture: Indaten\_simple-tex\_512.png

Real bitmap size: 250mm x 250mm

2. REFLECTION:

Fresnel IOR = 5

Reflection Glossiness = 0.8

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### Address:

ArcelorMittal Europe – Flat Products  
24-26, boulevard d’Avranches  
L-1160 Luxembourg

### Web sites – Where to find our BIM Objects ?

[industry.arcelormittal.com](http://industry.arcelormittal.com)

[constructalia.arcelormittal.com](http://constructalia.arcelormittal.com)

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### Important note:

Please remember that representation of colours on a computer monitor does not represent all the nuances of the real life objects. Colours are reproduced by appliance by using of different displaying methods, hence may be slightly different than original colours. In case of “strategic” importance of colour choice, we recommend checking the actual sample in the spot where the material is meant to be applied.

The final effect of the visualization is influenced by various factors, Inter alia; type of the material, its structure, refraction of light, but also the surroundings and surrounding related reflection of the light.