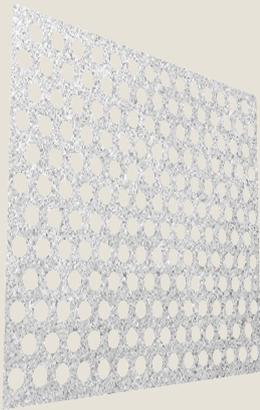


# Magnelis®



Product: **Magnelis®**  
Application: Facade

## Product description: properties

Magnelis® is a flat carbon steel product coated on both sides with a zinc-aluminium-magnesium alloy. This alloy, composed of 93.5% zinc, 3.5% aluminium and 3% magnesium, is applied by means of a continuous hot dip galvanizing process. This optimum chemical composition has been selected to provide the best results in terms of corrosion resistance. Magnelis® is available in a very wide range of steel grades: steels for cold forming and deep drawing applications, structural steels and High Strength Low Alloy steels.

- Outstanding corrosion resistance
- Very good formability
- Excellent abrasion resistance

## Advantages

Thanks to its 3% magnesium content, Magnelis® offers self-healing on cut edges and superior corrosion resistance in chloride and ammonia atmospheres. This high corrosion resistance means that less metallic coating is required (weight reduction), which facilitates processing steps such as welding.

Magnelis® behaves very well during profiling operations. The coating thickness must be compatible with both the desired degree of corrosion protection and the requirements of the forming processes envisaged.

The zinc-rich metallic coating composition permits all the conventional processing operations possible with standard hot dip galvanized steel: bending, drawing, clinching, profiling, stamping, welding etc. The friction coefficient of Magnelis® coated steel is lower than the one of standard hot dip galvanized steel and stable during forming operations.

## 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.

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

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 Magnelis® / Facade

### Suggested settings of rendering material:

#### 1. DIFFUSE:

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

Real bitmap size: 100mm x 100mm

#### 2. REFLECTION:

Fresnel IOR = 25

Reflection Glossiness = 0.75

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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.