



ArcelorMittal

Magnelis®

ArcelorMittal Flat Carbon Europe S.A. provides this warranty to

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hereafter referred to as the "Client"

relating to the quality of its Magnelis® ZM310-type coated sheets. Subject to the conditions of this document, this warranty covers the non-perforation and non-rupture due to corrosion of Magnelis® steel sheet in up to 1.0 mm thickness, coated with 310 g/m² on both sides, used for building purposes indoors and outdoors, for a period of 20 years, from the date of shipping by ArcelorMittal.

ArcelorMittal Flat Carbon Europe S.A.

The Client

20 year warranty
for Roofing & Cladding
in Marine Environment

Magnelis® - Date

If the Client does not return the present document duly dated, initialed and signed by the authorised person(s) within thirty (30) days at the latest of the date of its receipt, the terms and conditions of the present document shall be deemed to have been expressly accepted in full by the Client.

ArcelorMittal Flat Carbon Europe S.A. subjects its production to accelerated corrosion tests, the results of which act as a guide to continuously improve the quality of its products.

Since start of production, ArcelorMittal Flat Carbon Europe S.A. is taking samples and places them in exterior exposure sites. These samples are checked on a regular basis.

ArcelorMittal Flat Carbon Europe S.A. regularly inspects several buildings constructed using Magnelis® roofs in various climatic conditions.

ArcelorMittal Flat Carbon Europe S.A. runs quality assurance systems in line with the requirements of standard ISO 9000 in its production plants.

ArcelorMittal Europe – Flat Products

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Extent of the warranty

1. ArcelorMittal Flat Carbon Europe S.A.'s liability in pursuance of this warranty shall be exclusively limited, at the choice of ArcelorMittal Flat Carbon Europe S.A., either to the cost of repairing the faulty parts of the sheets or to supplying free of charge to the Client's facilities a sufficient quantity of sheets allowing the Client to manufacture components to replace those deemed faulty (profiled trays, panels etc). The replacement products must be Magnelis® sheets of the same type and with the same specifications as the original sheets.
2. Under no circumstances shall ArcelorMittal Flat Carbon Europe S.A. be liable for labour costs or other costs incurred due to the faulty sheets, or for repairing direct or indirect damage caused by the faulty sheets.
3. All warranty claims shall be sent in writing as soon as possible after the damage occurs to ArcelorMittal Flat Carbon Europe S.A., which shall be allowed to inspect the items deemed to be faulty. The Client shall detail in its claim the precise identification of the materials deemed to be non-compliant, including the order number, the invoice number, the coil number, the shipping date and the installation date.
4. The Client shall do everything possible to facilitate the inspection of the materials by ArcelorMittal Flat Carbon Europe S.A. and to limit building reinstatement costs.
5. This warranty is granted to the Client of ArcelorMittal Flat Carbon Europe S.A. and to the Client alone. It may only be transferred in the event of a change of control of the Client's company, and within 15 days of the change occurring. Only in this case may the remainder of the warranty be transferred to the Client's successor. The Client may not provide its own customers with warranties relating to the product sold by ArcelorMittal Flat Carbon Europe S.A. and which would exceed the terms of this warranty.
6. The warranty covers all products shipped from the date of signing of this warranty certificate. ArcelorMittal Flat Carbon Europe S.A. reserves the right to modify the terms of the warranty at any time, with the exception of sheets already delivered or orders already placed.
7. It is agreed that the warranty shall not apply in the event of damage caused during transportation.
8. In the case of an international sale, Belgian law shall be the only law applicable to the present warranty and to any disputes that may arise between ArcelorMittal Flat Carbon Europe S.A. and the Client. The courts of Brussels shall have sole and exclusive jurisdiction in the event of any disputes

arising in connection with this warranty. ArcelorMittal Flat Carbon Europe S.A. reserves the right, however, to bring any dispute involving the Client before the courts of the Client's jurisdiction of incorporation.

Any disputes relating to domestic sales shall be brought exclusively before the courts of the capital of the country in question.

9. Only the English version of this text shall be deemed authentic.

Application conditions

The 20 year warranty applies to all buildings:

1. Situated in locations of at least 300 m and up to 2000 m from the seafront (atmospheric corrosivity category C5-M as per EN ISO 12944-2); in other words, excluding areas exposed to permanent spraying with fresh water or salt water. For buildings situated in areas with atmospheric corrosivity categories C4 and C3 this warranty is valid for 25 years.

The warranty applies to Magnelis® sheets used for roofing and cladding in buildings situated in geographical Europe and North Africa.

It covers the following European countries:

Norway, Sweden, Finland, Denmark, Ireland, United Kingdom, Netherlands, Belgium, Luxembourg, Germany, Poland, Estonia, Latvia, Lithuania, Byelorussia, Ukraine, Czech Republic, Slovakia, Austria, Switzerland, France, Spain, Portugal, Italy, Slovenia, Croatia, Hungary, Romania, Bulgaria, Greece, Moldavia and Russia West of 60° east longitude.

It covers the following North African countries:

Morocco, Algeria, Tunisia, Libya and Egypt.

2. Exposed to moderate corrosive emissions, in other words excluding those subject to the fallout of corrosive chemical products of any kind, smoke or rainwater containing carbon, deposits or particles of heavy metals such as iron or copper, alkaline products such as ash, cement dust or animal excrement.

3. This warranty does not apply to the adhesion performance of foam on the Magnelis® surface, when Magnelis® coated steel is used for the fabrication of sandwich panels.

4. This warranty applies only to applications where the Magnelis® surface is left as bare metal, as it is supplied by ArcelorMittal. Any surface treatment, additional coating or painting results in the loss of this warranty.

Construction rules

To ensure the warranty applies, the following rules must be complied with during installation.

1. Internal bending radii must be at least equal to the values in the table given below.
2. For use as roofing, this shall be designed so that there is no possibility of water or waste – organic or otherwise – stagnating on the Magnelis®, including right on the fasteners and under the profile overlaps.
3. The slope of the roof shall be at least 2 degrees.
4. In cladding applications, all individual elements made of Magnelis® and the whole outer skin of the building shall be profiled in such way that water can drain off freely.
5. Assemblies with other parts (gutters, pipes, ducts for cables, liquids/gases etc) shall be designed and executed in such a way that they do not contribute to keeping fouling or moisture on the Magnelis® surface. This applies particularly for assemblies that form a pocket or trough, and where Magnelis® surfaces are separated from each other, or from surfaces made of other materials, only by a thin gap.
6. Fasteners shall not contain any copper or lead parts in direct contact with the Magnelis® sheet, or any material liable to cause corrosive run-off onto the Magnelis® sheet. They shall be suitably shaped to prevent any local indentation of the Magnelis® sheets, which may prevent rainwater from draining off freely.
7. Forming shall occur without subjecting the Magnelis® sheet to high tensile stress or alternating bending stress.
8. Magnelis® sheets that have sustained damage of a mechanical or chemical nature during forming, transportation, storage or assembly shall not be used. Sheets that sustain damage after assembly shall be replaced before construction work comes to an end.
9. All contact with wet insulation materials, impregnated wood and other corrosive products is to be avoided.
10. After fitting, all tools, debris and miscellaneous items must be removed. Pencil or pen marks and any other type of marking must be removed. Magnelis® roofs are to be inspected annually by the Client or its authorised representative. They are to be cleaned regularly and any accidental damage noted is to be repaired (scratches, dents etc).

Grade	Thickness ≤ 0.75 mm	Thickness > 0.75 mm
DX51D to DX57D S220GD to S390GD HX260LAD to HX420LAD	r = 2 x thickness	r = 4 x thickness