



ArcelorMittal

Magnelis®

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

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hereafter referred to as the “Client”

relating to the quality of its Magnelis® ZM310-type coated flat carbon steel. Subject to the conditions of this document, this guarantee covers the non-perforation and non-rupture due to corrosion of Magnelis® steel sheet coated with 310 g/m² on both sides according to European standard EN 10346, used for solar applications, for a period of 25 years, from the date of shipping by ArcelorMittal.

Magnelis® – Date

The terms and conditions of this Guarantee will enter into force as follows: i) the Client shall return this document duly dated, initialled and signed by the authorised person(s) within thirty (30) days of the date of its receipt; or ii) this document shall be deemed to have been tacitly accepted in full by the Client upon expiry of the period of thirty (30) days from the date of its receipt. ArcelorMittal may cancel the Guarantee if it does not receive payment for coils within three (3) months of delivery.

Typical example of a guarantee document that may be granted based on our technical team's examination of the environmental questionnaire answers provided at the time of enquiry.

ArcelorMittal Flat Carbon Europe S.A.

The Client

25 year guarantee
in Solar Applications

Extent of the guarantee

1. ArcelorMittal Flat Carbon Europe S.A.'s liability under this guarantee shall be exclusively limited, at the choice of ArcelorMittal Flat Carbon Europe S.A., either to the cost of repairing any faulty parts or to supplying free of charge to the Client's facilities a sufficient quantity of material allowing the Client to manufacture components to replace those deemed faulty (cold formed sections, panels etc.). The replacement products must be ArcelorMittal coated steel similar to the original delivery.
2. Under no circumstances shall ArcelorMittal Flat Carbon Europe S.A. be liable for labour costs or other costs incurred due to the faulty material, or for repairing direct or indirect damage caused by the faulty parts.
3. All guarantee 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 guarantee 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 guarantee be transferred to the Client's successor. The Client may not provide its own customers with guarantees relating to the product sold by ArcelorMittal Flat Carbon Europe S.A. and which would exceed the terms of this guarantee.
6. The guarantee covers all products shipped from the date of signing of this guarantee certificate. ArcelorMittal Flat Carbon Europe S.A. reserves the right to modify the terms of the guarantee at any time, with the exception of sheets already delivered or orders already placed.
7. It is agreed that the guarantee 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 guarantee 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 guarantee. 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.

10. The Client represents and warrants that it will comply (at no additional cost to ArcelorMittal) with all applicable laws, including those concerning corruption, money-laundering, the payment of bribes, tax evasion, and trade and economic sanctions, including regulations relating to the USA and Europe. The Client must maintain all records necessary pursuant to such laws and, on request, must promptly make these available for inspection by any relevant authority that is entitled to inspect them and by ArcelorMittal (or its authorised representative).

The Client undertakes to ensure that:

- (i) no products, services or technology will be provided, sold, supplied or transferred for use, directly or indirectly, in breach of any applicable economic sanction laws; and
- (ii) no persons or entities on an official sanction list under applicable trade sanction laws, notably under any embargoes from any international or national organisations or from any States, are or will be involved in or could benefit from the products supplied by ArcelorMittal or benefit from contractual relationships between the Client and ArcelorMittal.

ArcelorMittal may terminate any contract or agreement, including this Guarantee, without any liability to ArcelorMittal, if the Client has acted in breach of this section, or if ArcelorMittal has reasonable grounds to suspect that the Client has acted in breach of this section, without prejudice to any claims by ArcelorMittal for any loss or expense incurred as a result of such a breach, for which the Client shall indemnify and hold ArcelorMittal harmless.

11. The Vendor's General Conditions of Sale form an integral part of this Guarantee.

Application conditions

This guarantee applies to all supporting structures for all solar applications, such as:

- sheets or other parts contributing to the roofing or cladding (being part of the roofing or cladding, e.g. trapezoidal sheets, corrugated sheets, tiles or sandwich panels) that will support the photovoltaic (PV) cells or panels,
- profiles between roofing and PV panels (connection parts),
- deep-drawn sheets for waterproof casings used for thermal solar panels or as support for PV panels, and
- profiles for support of panels in solar energy generation plants.

1. This guarantee covers supporting structures situated in locations with a normal atmospheric corrosivity category (C1 ... C4 as per EN ISO 12944-2:2017) through the course

of this period; in other words, excluding those in highly polluted areas or areas less than 2.0 km from the seafront and/or subjected to spraying with fresh water or salt water (corrosivity category C5 and CX as per EN ISO 12944-2:2017). This guarantee is valid for 20 years when Magnelis® is used in areas more than 300 m and up to 2.0 km from the seafront (C5 as per EN ISO 12944-2:2017), provided that the installation is not subjected to spraying with fresh water or salt water.

2. This guarantee covers supporting structures exposed to moderately corrosive emissions during this period; 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, or alkaline products such as ash, cement dust or animal excrement.

3. This guarantee on Magnelis® is not valid:

- for assembled cold formed parts made with Magnelis®, from which water cannot drain off freely,
- for assemblies with other parts, which may contribute to keeping pollution or moisture on the Magnelis® surface,
- for assemblies where the Magnelis® surfaces are separated from each other, or from surfaces made of other materials, by only a narrow gap,
- for welded assemblies, if a fault occurs within an area less than 50 mm from the welds and if the weld seams are not protected after welding and not regularly inspected,
- for assemblies that involve adhesive bonding of Magnelis® to itself or to other materials,
- where the Magnelis® surface comes into contact with the soil, and
- for applications involving the water-circulation system of solar equipment, including the storage tank.

4. This guarantee 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 guarantee.

5. The visual appearance of the cut edges and discoloration of the Magnelis® surface due to run-off from cut edges or adjacent parts (made of any material) is not covered by this guarantee.

6. This guarantee against corrosion is not valid for locations exposed to high abrasion (desert regions with strong winds and sand abrasion).

7. Magnelis® installations 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. Appropriate records to be kept and made available on request.

Special precautions concerning inspection and maintenance have to be taken:

- All parts of the installation are to be inspected annually by the Client, its authorised representative or the owner/user of the installation and any accidental damage noted is to be repaired (scratches, dents, bulges, starting of corrosion etc.).
- The entire installation is to be annually maintained in order to remove any deposits of dirt, leaves and other debris that can hinder the free drainage of water, and the internal and external parts of the installation are to be given an additional wash. The Client, its authorised representative or the owner/user of the installation must check that the cleaning process and detergents used do not damage the Magnelis® coating.

Design recommendations

To ensure the guarantee applies, the following rules must be complied with in design of parts and during part making and installation:

1. Internal bending radii must be at least equal to twice the thickness of the sheet ($r \geq 2 \times \text{thickness}$).
2. The whole assembly shall be designed and installed so that there is no possibility of water or waste – organic or otherwise – stagnating on the Magnelis®, including at the fasteners and under the profile overlaps.
3. The slope of any surface shall be inclined at least 2 degrees in order to allow water to drain off.
4. The design of the structure shall avoid the risk of locally increased corrosion, e.g. caused by water dripping onto the Magnelis® surface.
5. 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.
6. Fasteners made of stainless steel shall be suitably isolated from the Magnelis® surface so as to avoid increased corrosion as a result of the formation of a corrosion cell. One option is to use plastic washers to separate the fasteners from the Magnelis® surface.
7. Forming shall occur without subjecting the Magnelis® sheet to high tensile stress or alternating bending stress.
8. Magnelis® parts that have sustained mechanical or chemical damage during forming, transportation, storage or assembly shall not be used. Parts that sustain damage after assembly shall be replaced before construction work comes to an end.
9. All contact with wet insulation materials, impregnated timber 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.

ArcelorMittal Europe – Flat Products

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ArcelorMittal