

Data sheet: A1

Plate Mill Products: General

Hot Rolled Plate

General description

This data sheet serves as an introduction to hot rolled plate produced at ArcelorMittal South Africa.

Plate normally ranges in width from 1200mm to 3 200mm and thickness from 6mm to a maximum of 80mm for structural steels and a maximum of 60mm for pressure vessel steels. The maximum thickness available, however, also depends on strength levels and ultrasonic test requirements. Refer to the paragraph on dimensions for more detail.

Hot rolled plate is used in the manufacture of heavy engineering products such as construction, mining, pressure vessels, overhead cranes, dump trucks and mixer blades.

The relevant steels most commonly used in the South African market are listed in the data sheet: Plate Mill Products (file reference A1.6) and Price Lists 110 and 111. Other steels can be supplied on enquiry.

Manufacturing process

Steel making

Steel is supplied from a basic oxygen furnace using molten iron, clean scrap and direct reduced iron. All steel is desulphurised to maintain a high degree of cleanliness and is made fully killed and fine-grained from continuously cast slabs. Full shrouding techniques and automatic mould level control are applied to ensure superior internal and surface quality.

Plate mill

Slabs are reheated in pusher furnaces and rolled into plates in a four high reversing mill, cooled on cooling beds and then levelled and sheared or flame cut to the ordered size. To achieve superior mechanical properties, plates can be heat-treated as in normalised, quenched or quenched and tempered.

Dimensions

Hot rolled plate is available in dimensions as shown in the table below.

Minimum thickness	As rolled Heat treated	6mm (5mm on lower strength grades) 6mm
Maximum thickness		Depending on quality (Refer to price lists)
Width	As rolled Heat treated	1200mm to 3 200mm, depending on thickness and mass 1200mm to 3 000mm, depending on thickness and mass
Length	As rolled Heat treated	4 000mm to 13 000mm 6 000mm to 13 000mm

Notes:

1. For more details refer to the data sheet: Plate Mill Product Dimensions (file reference A1.3)

For further information, contact:

ArcelorMittal South Africa Limited, PO Box 2, Vanderbijlpark 1900. Toll free number 0800 005043

Care has been taken to ensure that the information in this data sheet is accurate. ArcelorMittal South Africa Limited does not, however, assume responsibility for any inaccuracies or misinterpretations of this data. We are continuously engaged in product development and revised data sheets will be issued from time to time. Please ensure that you have the most recent issue. Effective date: February 2015

2. As rolled lengths above 13m only available on enquiry.

Plate mass

The maximum plate mass available is 11 tons, depending on thickness and material specification. Refer to Data Sheet A1.4 for detail on plate size tables.

Tolerances

When steel is ordered to an international specification, it is produced to the tolerances specified. If stricter tolerances are required, these are subject to enquiry.

Where steel specifications do not include tolerance specifications, ArcelorMittal South Africa produces plate in accordance with EN 10029 Class B. Refer to data sheet: Plate Mill Product Tolerances (file reference A1.4).

Supply tolerances for plate

ArcelorMittal South Africa reserves the right to supply ordered quantities, whether ordered on the basis of tonnage or number of plates, within the tolerances tabled in the applicable price lists.

Packaging

Plates are normally packed 'loose bare staggered'. Other packaging methods are available on application. Reference should be made to the packaging brochure on the website for more detail.

Order check list

To ensure that ArcelorMittal South Africa supplies material in accordance with the customer's needs, the following information must be reflected on the order:

- Specification, including the complete designation, e.g. En 10025 -2-S355 JR+AR
- End-use
- Dimensions.
- Dimensional tolerances (if more restrictive than the applicable material specification).
- Tonnage.
- Certification required.
- Bundle mass limitation.
- Limitation on overage or underage.
- Flatness tolerance (if more restrictive than the applicable material specification).
- Ultrasonic testing (if required)
- Packaging required.
- Additional requirements permitted by the applicable specification (supplementary requirements).
- Other requirements.

Certification

Certification is normally done according to EN10204 Type 3.1.

Steel specifications for which both the chemical analysis and the mechanical properties are specified will be supplied with analysis and test certificates in accordance with the ordered specification.

Steel specifications produced to chemical analysis only, for example the Commercial Quality or SAE specifications, will be supplied with analysis certificates only.

Supply conditions

Hot rolled plate is supplied in terms of Price Lists 110, and 111 and ArcelorMittal South Africa's General Conditions of Sale.

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