

Data sheet: A1.6

Available Specifications to the Domestic Plate Market

Plate mill products

General description

This data sheet serves as an introduction to all the steel specifications that are generally available from the plate mill at ArcelorMittal South Africa. This data sheet does not address all the steels that ArcelorMittal South Africa produces. It merely indicates the generally available specifications. Other international specifications are available on enquiry. Please note that the dimensions for all steel plates in the as rolled, normalised and quenched and tempered conditions are described in the data sheet: Plate Mill Product Dimensions file reference A1.3.

When a steel type is selected, reference should be made to the relevant data sheet and the original material specification to determine the prescribed heat-treated condition for a particular thickness. This information must be used to determine which dimensions are available.

ArcelorMittal South Africa produces material of 5mm to 100mm thick (**depending on the quality**) as well as from 1200mm to 3200mm wide on the plate mill. Material thinner than 13,0mm and narrower than 1 870mm is generally produced in the hot strip mill. Other dimensions may be available on enquiry.

Technical information on steel making practice, mechanical properties and chemical composition of the most popular steels is available from data sheets published for these particular steels. These data sheets should be consulted to ensure that the correct steel is selected for each application.

Mechanical properties shown are an indication only and differ for different thicknesses. Refer to the applicable data sheet or specification for detail.

Steel types

The maximum thickness of all steel types in Tables 1 to 7 is also a function of ultrasonic test requirements. Refer to the data sheet: Plate Mill Products (file reference A1).

Table 1. Commercial steel specifications

Specification	Thickness (mm)	Data sheet file reference
Commercial Quality	5 - 100 101 - 150 #	A2.1 A2.1
Flange & Profile Cut	8 - 100	Sizes as per Price List 110

#Note: > 100mm on enquiry only. No guarantee on internal soundness

For further information, contact:

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

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Table 2. Structural steel DUAL specifications

(As the SANS 1431 specification has been replaced by EN10025. This will be available on enquiry only.)

Specification	Thickness (mm)	Minimum yield strength (MPa)	Tensile strength (MPa)	Data sheet file reference
EN 10025 - 2 - S 275 JR +AR / SANS 1431 GR300 WA	6 - 80	300	450 - 560	-
EN 10025 - 2 - S 355 JR +AR / SANS 1431 GR350 WA	6 - 80	350	480 - 630	-

Table 3. Structural steel specifications

Specification	Thickness (mm)	Minimum yield strength (MPa)	Tensile strength (MPa)	Data sheet file reference
EN 10025 - 2 - S 235 JR +AR	5 - 80	235	340 - 510	A3.7
EN 10025 - 2 - S 235 J0 +AR	5 - 80	235	340 - 510	A3.7
EN 10025 - 2 - S 235 J2 +N	6 - 80	235	340 - 510	A3.7
EN 10025 - 2 - S 275 JR +AR	5 - 80	275	410 - 560	A3.7
EN 10025 - 2 - S 275 J0 +AR	5 - 80	275	410 - 560	A3.7
EN 10025 - 2 - S 275 J2 +N	6 - 80	275	410 - 560	A3.7
EN 10025 - 2 - S 355 JR +AR	5 - 80	355	410 - 560	A3.7
EN 10025 - 2 - S 355 JR +N	6 - 80	355	490 - 630	A3.7
EN 10025 - 2 - S 355 J0 +AR	6 - 80	355	490 - 630	A3.7
EN 10025 - 2 - S 355 J0 +N	6 - 80	355	490 - 630	A3.7
EN 10025 - 2 - S 355 J2 +N	6 - 80	355	490 - 630	A3.7
EN 10025 - 2 - S 355 K2 +N	6 - 80	355	470 - 630	A3.7
EN 10025 - 3 - S 355 NL	6 - 80	355	470 - 630	A3.7
ASTM A36	6 - 80	250	400 - 550	-
ASTM A283 Gr C	6 - 80	205	380 - 515	-

Table 4. Ship hull steel specifications

Specification	Thickness (mm)	Minimum yield strength (MPa)	Tensile strength (MPa)	Data sheet file reference
ABS Ship Plate GR A	6 - 30	235	400 - 520	-
ABS Ship Plate GR EH36	6 - 30	355	490 - 620	-
LLOYDS GR A	6 - 30	235	400 - 520	A3.5
LLOYDS GR EH36	6 - 30	355	490 - 620	A3.5
ABS / LLOYDS GR A	6 - 30	235	400 - 520	-
ABS / LLOYDS GR EH36	6 - 30	355	490 - 620	-
ABS / LLOYDS GR EH36 / S355 J2+N	6 - 30	355	490 - 620	-

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Table 5. Pressure vessel steel specifications

Specification	Thickness (mm)	Minimum yield strength (MPa)	Tensile strength (MPa)	Data sheet file reference
ASTM A516 Gr 60	6,0 - 60	220	415 - 550	A6.4
ASTM A516 Gr 65	6,0 - 60	240	450 - 585	A6.4
ASTM A516 Gr 70	6,0 - 60	260	485 - 620	A6.4
ASTM A285 Gr C	6,0 - 60	205	380 - 515	A6.4
EN 10028-2-P235GH+AR	6,0 - 40	235	360 - 480	A6.4
EN 10028-2-P235GH+N	6,0 - 60	235	360 - 480	A6.4
EN 10028-2-P265GH+AR	6,0 - 40	265	410 - 530	A6.4
EN 10028-2-P265GH+N	6,0 - 60	265	410 - 530	A6.4
EN 10028-2-P295GH+AR	6,0 - 40	295	460 - 580	A6.4
EN 10028-2-P295GH+N	6,0 - 60	295	460 - 580	A6.4
EN 10028-2 16Mo3	6,0 - 30	275	440 - 590	A6.4
EN 10028-3-P355NH	6,0 - 60	355	490 -630	A6.4
EN 10028-3-P355NL1	6,0 - 60	355	490 -630	A6.4
EN 10028-3-P355NL2	6,0 - 60	355	490 -630	A6.4

Table 6. Steel for Galvanising Baths

Specification	Thickness (mm)	Hardness (Brinell)	Application
Galvanising Bath Steel	6 - 60mm	Analysis only	Suitable for building galvanizing baths

Table 7. Wear resistant steel specifications

Specification	Thickness (mm)	Hardness (Brinell)	Data sheet file reference
ROQ-last® TH 400	6 - 25	360 - 420	A5.2
WEARPLATE 200 ¹	6 - 60		A2.2
15MnB5 AMSA ¹	6 - 20		A2.2

Note:

1. WEARPLATE 200 & 15MnB5 AMSA is supplied as rolled.

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