

Data sheet: B3.1

Cold Rolled Steel Sheet for Drawing EN 10130 DC01 - DC06

General Description

Cold rolled steel sheet for drawing and forming applications is produced in a broad spectrum of grades meeting specifications as listed in the tables below. The most suitable specification can be selected, depending on the intended end-use and severity of fabrication.

All Drawing and Forming specifications may be welded by most standard welding processes.

All cold rolled drawing steels can readily be painted. Refer to the paint manufacturers' prescribed methods for pre-treatment and application.

Chemical composition

Table 1: Chemical composition specification (ladle analysis, percent)

Specification	C max	Mn max	P max	S max	Si max	Al min	Ti max
EN 10130 DC06	0,02	0,25	0,020	0,020	0,03	0,010	0,3
EN 10130 DC05	0,06	0,35	0,025	0,025	0,03	0,010	-
EN 10130 DC04	0,08	0,40	0,030	0,030	-	-	-
EN 10130 DC01	0,12	0,60	0,045	0,045	-	-	-

For further information, contact:

ArcelorMittal South Africa Limited, PO Box 2, Vanderbijlpark 1900. T +27 (0) 16 889 9111
<https://www.arcelormittalsa.com/Products.aspx>

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: March 2019**

Mechanical properties

Table 2: Mechanical properties (4) in the skin passed condition

Specification	Maximum yield strength ¹ (MPa)	Tensile strength (MPa)	Minimum elongation ² (%)	Bar r ₃	Bar n ₃	r ₉₀ ³	n ₉₀ ³
EN 10130 DC06	170	270 - 330	41	-	-	2,1 min	0,22 min
EN 10130 DC05	180	270 - 330	40	-	-	1,9 min	0,20 min
EN 10130 DC04	210	270 - 350	38	-	-	1,6 min	0,18 min
EN 10130 DC01	280	270 - 410	28	-	-	-	-

Notes:

- When the thickness t is $0.5\text{mm} < t \leq 0.7\text{mm}$ the value for the yield strength is increased by 20 MPa. For thickness $t \leq 0.5\text{mm}$ the value is increased by 40 MPa.
- When the thickness t is $0.5\text{mm} < t \leq 0.7\text{mm}$ the minimum value for the elongation is reduced by 2 percentage points. For a thickness $t \leq 0.5\text{mm}$ the minimum value is reduced by 4 percentage points.
- The values of r_{90} and n_{90} or Bar r and Bar n only apply for thicknesses $0.6 \leq t < 1.2\text{mm}$. The Bar r values and Bar n values for thicknesses $t \geq 1.2\text{mm}$ are available on enquiry.
- For design purposes the lower limit of yield strength for DC04 and DC01 may be assumed to be 140 MPa, and for DC05 and DC06 120 MPa.
- The tensile test is carried out as described in EN 10002 Part 1 using type 2 specimens (initial gauge length $L_0 = 80\text{mm}$). Yield strength is determined by the 0,2% off-set method. The test pieces are taken perpendicular to the rolling direction.

Strain ageing

DC06, DC05 and DC04 are stabilised and therefore guaranteed to be strain ageing resistant for a period of six months from the time of dispatch. No deterioration in mechanical properties or ductility due to strain ageing will take place during this period. The upper limit yield stress of 280 MPa for DC01 is valid for 3 months from the time of dispatch.

Temper rolling

All steels are normally supplied in the temper rolled (skin passed) condition.

Surface texture

All the material may be supplied in standard surface texture with 'light matt', 'normal' or 'matt' surfaces as set out in Data Sheet: Cold Rolled Products (file reference B1).

For further information, contact:

ArcelorMittal South Africa Limited, PO Box 2, Vanderbijlpark 1900. T +27 (0) 16 889 9111
<https://www.arcelormittalsa.com/Products.aspx>

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: March 2019

Dimensions

Table 3: Available dimensions

Thickness t (mm)	Width (mm)
$0,40 \leq t < 0,50$	800 - 1250
$0,50 \leq t < 0,65$	800 - 1300
$0,65 \leq t < 0,70$	800 - 1350
$0,70 \leq t \leq 1,60$	800 - 1600
$1,60 < t \leq 2,00$	800 - 1500

Notes:

1. Thicknesses and Widths are available in increments in accordance with Price List 131.
2. Within the ranges shown in the above table, certain specific sizes are Standard Items (refer to Price List 131). Standard Items are preferentially priced and are available in smaller quantities than non-standard items.
3. Subject to width/thickness ratio limitations, not full range available in all specifications.

Dimensional tolerances

Tolerances on shape and dimensions are given in Data Sheet: Cold Rolled Product Tolerances (file reference B1.1).

Coil inside diameter

The standard inside diameter is 508mm (610mm on enquiry).

Corrosion prevention

Unless adequately protected, cold rolled sheet is susceptible to corrosion, and customers are advised to take precautions as set out in Data Sheet: Cold Rolled Products (file reference B1).

Certification

Test and analysis certificates are supplied.

Supply conditions

Cold rolled drawing and forming steels are supplied in terms of Price List 131 and ArcelorMittal South Africa's General Conditions of Sale.

For further information, contact:

ArcelorMittal South Africa Limited, PO Box 2, Vanderbijlpark 1900. T +27 (0) 16 889 9111
<https://www.arcelormittalsa.com/Products.aspx>

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: March 2019**