



ArcelorMittal

ArcelorMittal Sestao

Ultra-Thin Steels Range (UF Steels Range)

Ultra-Thin steels range (UF Steels) brings a new steel concept that represents a step forward in the traditional hot rolled process. This process is similar to the classic cold rolled process. ArcelorMittal Sestao Ultra Thin steels transfer their technological advantages straight to our customers.

Properties

Restricted thickness tolerances, minimum thickness deviation along the length of the coil, good profile control, uniformity in mechanical properties, improved surface quality thanks to the picking process, wide range of grades and suitability for galvanising (class 1).

Advantages

These steels are suitable to be used in applications to substitute cold rolled material, particularly in the high strength micro alloy range (HSLA).

Applications

These steels are used for a wide range of applications. In the automotive sector for internal structural parts, profiled components and precision tubes. In the shelving and building

sector for horizontal parts. In the industrial sector in general for a wide range of flat parts (such as doors) and formed components (radiators, metallic furniture...).

ArcelorMittal Sestao's offer

The capability of thickness reduction and control of the CSP mill together with the shape control possibilities of the tension leveller located on the picking line allows us to provide this range of "UF" products which stand out from classical flat hot rolled material.

UF steels are supplied **pickled but exceptionally they can be supplied mill finished.**

There are **15** qualities available and **1** under development. These steels are continuously being developed to fulfil our customer's expectations.



Very good uniformity in mechanical properties along the coil.

Chemical properties that **guarantee all** transformation processes (welding, coating...)

Thickness range vary from **1.00 mm** to 1.99 mm depending on the requested grade (please see tables below).

Thickness tolerances: **1/2, 1/3 EN 10051 (For more restricted tolerances please contact us).**

Three levels of flatness guaranteed **in coils:**

- **Normal:** As per table 7 EN 10051
- **Restricted:** 1/2 EN 10051
- **Special:** 1/3 EN 10051

With **skin pass** process (under request) it is possible to gain surface roughness and a finish that allow **semi-visible** applications.





Qualities

ARCELORMITTAL SESTAO'S RANGE

Drawing steels	Steels for enamelling	High-strength low allow steels	High-strength low allow steels	Atmospheric corrosion resistant steel	Dual Phase
ACB 11 UF		ACB 240 UF	ACB 460 UF	ACB 355 J2W	ACB DP 600 UF
ACB 11 UF CL1		ACB 280 UF	ACB 500 UF		
ACB 12 UF	ACB 300 EK UF	ACB 315 UF	ACB 550 UF		
ACB 13 UF		ACB 355 UF			
		ACB 380 UF			
		ACB 420 UF			

Available qualities

Qualities under development:
consultastecnicas.sestao@arcelormittal.com

Dimensions

COLD FORMING AND DRAWING STEELS

Thickness (mm)	Min width (mm)	ACB 11 UF	ACB 11 UF CL1	ACB 12 UF	ACB 13 UF
		Max width (mm)			
≥ 1,00 & ≤ 1,19	845	1020		-	
≥ 1,20 & ≤ 1,29		1250		1020	
≥ 1,30 & ≤ 1,34				1350	
≥ 1,35 & ≤ 1,49		1360			

UF thicknesses adapted to each product category.

For other dimensions please contact:
consultastecnicas.sestao@arcelormittal.com

Thickness tolerances

Nominal thickness (mm)	Nominal width (mm)	Tolerances as per EN 10051	ARCELORMITTAL SESTAO OFFER		Tolerances as per EN 10131 (cold rolled)	
		Normal	1/2 EN	1/3 EN	Normal	Restricted
≥ 1,00 & ≤ 1,20	≤ 1200	±0,13	±0,065	±0,045	±0,06	±0,04
	> 1200 & ≤ 1550	±0,14	±0,065	±0,045	±0,07	±0,05
≥ 1,21 & ≤ 1,49	≤ 1200	±0,13	±0,065	±0,045	±0,08	±0,05
	> 1200 & ≤ 1550	±0,14	±0,070	±0,050	±0,09	±0,06

1/3 EN 10051: Please ask for conditions and price extra.

UF thicknesses adapted to each product category.

For other dimensions please contact:
consultastecnicas.sestao@arcelormittal.com

HIGH STRENGTH LOW ALLOY STEELS

Thickness (mm)	Min width. (mm)	ACB 240 UF	ACB 280 UF	ACB 315 UF	ACB 340 UF	ACB 355 UF	ACB 380 UF	ACB 420 UF	ACB 460 UF	ACB 500 UF	ACB 550 UF
		Max width (mm)									
≥ 1,10 & ≤ 1,19	845	1000		1020							
≥ 1,20 & ≤ 1,34		1275			1250						
≥ 1,35 & ≤ 1,49		1300				1275					
≥ 1,50 & ≤ 1,79									1200	1020	1020
≥ 1,80 & ≤ 1,99		1460						1275	1270		1250

UF thicknesses adapted to each product category.

For other dimensions please contact: consultastecnicas.sestao@arcelormittal.com

Width not established, please contact: consultastecnicas.sestao@arcelormittal.com

Thickness tolerances ACB 240 UF / ACB 280 UF / ACB 315 UF

Nominal thickness (mm)	Nominal width (mm)	Tolerances as per table 3 EN 10051	ARCELORMITTAL SESTAO OFFER		Tolerances as per EN 10131 (cold rolled)	
		Normal	1/2 EN	1/3 EN	Normal	Restricted
≥ 1,00 & ≤ 1,20	≤ 1200	±0,17	±0,085	±0,055	±0,06	±0,04
	> 1200 & ≤ 1550	±0,18	±0,090	±0,060	±0,07	±0,05
≥ 1,21 & ≤ 1,49	≤ 1200	±0,17	±0,085	±0,055	±0,08	±0,05
	> 1200 & ≤ 1550	±0,18	±0,090	±0,060	±0,09	±0,06
≥ 1,50 & ≤ 1,79	≤ 1200	±0,17	±0,085	±0,055	±0,10	±0,06
	> 1200 & ≤ 1550	±0,18	±0,090	±0,060	±0,11	±0,07
≥ 1,80 & ≤ 1,99	≤ 1200	±0,17	±0,085	±0,055	±0,10	±0,06
	> 1200 & ≤ 1550	±0,18	±0,090	±0,060	±0,11	±0,07

1/3 EN 10051: Please ask for conditions and price extra.

UF thicknesses adapted to each product category.

For other dimensions please contact: consultastecnicas.sestao@arcelormittal.com

Thickness tolerances ACB 340 UF / ACB 355 UF / ACB 380 UF

Nominal thickness (mm)	Nominal width (mm)	Tolerances as per table 3 EN 10051	ARCELORMITTAL SESTAO OFFER		Tolerances as per EN 10131 (cold rolled)	
		Normal	1/2 EN	1/3 EN	Normal	Restricted
≥ 1,00 & ≤ 1,20	≤ 1200	±0,195	±0,097	±0,065	±0,072	±0,048
	> 1200 & ≤ 1550	±0,205	±0,102	±0,068	±0,084	±0,060
≥ 1,21 & ≤ 1,49	≤ 1200	±0,17	±0,097	±0,065	±0,096	±0,060
	> 1200 & ≤ 1550	±0,18	±0,102	±0,068	±0,108	±0,072
≥ 1,50 & ≤ 1,80	≤ 1200	±0,17	±0,097	±0,065	±0,120	±0,072
	> 1200 & ≤ 1550	±0,18	±0,102	±0,068	±0,136	±0,084
≥ 1,80 & ≤ 1,99	≤ 1200	±0,17	±0,097	±0,065	±0,120	±0,072
	> 1200 & ≤ 1550	±0,18	±0,102	±0,068	±0,136	±0,084

1/3 EN 10051: Please ask for conditions and price extra.

UF thicknesses adapted to each product category.

For other dimensions please contact: consultastecnicas.sestao@arcelormittal.com

Thickness tolerances ACB 420 UF / ACB 460 UF / ACB 500 UF / ACB550 UF

Nominal thickness (mm)	Nominal width (mm)	Tolerances as per EN 10051	ARCELORMITTAL SESTAO OFFER		Tolerances as per EN 10131 (cold rolled)	
		Normal	1/2 EN	1/3 EN	Normal	Restricted
≥ 1,35 & ≤ 1,49	≤ 1200	±0,22	±0,110	±0,073	±0,112	±0,070
	> 1200 & ≤ 1550	±0,23	±0,115	±0,076	±0,126	±0,084
≥ 1,50 & ≤ 1,79	≤ 1200	±0,22	±0,110	±0,073	±0,140	±0,084
	> 1200 & ≤ 1550	±0,23	±0,115	±0,076	±0,154	±0,098
≥ 1,80 & ≤ 1,99	≤ 1200	±0,22	±0,110	±0,073	±0,140	±0,084
	> 1200 & ≤ 1550	±0,23	±0,115	±0,076	±0,154	±0,098

1/3 EN 10051: Please ask for conditions and price extra.

UF thicknesses adapted to each product category.

For other dimensions please contact: consultastecnicas.sestao@arcelormittal.com

Width not established, please contact: consultastecnicas.sestao@arcelormittal.com

DUAL PHASE STEEL

Thickness (mm)	Min width (mm)	ACB DP 600 UF
		Max width (mm)
≥ 1,50 & ≤ 1,79	845	1100
≥ 1,80 & ≤ 1,99		

UF thicknesses adapted to each product category.

Width not established, please contact: consultastecnicas.sestao@arcelormittal.com

Thickness tolerances

Nominal thickness (mm)	Nominal width (mm)	Tolerances as per EN 10051	ARCELORMITTAL SESTAO OFFER		Tolerances as per EN 10131 (cold rolled)	
		Normal	1/2 EN	1/3 EN	Normal	Restricted
≥ 1,50 & ≤ 1,79	≤ 1200	±0,17	±0,085	±0,055	±0,120	±0,072
	> 1200 & ≤ 1550	±0,18	±0,090	±0,060	±0,136	±0,084
≥ 1,80 & ≤ 1,99	≤ 1200	±0,17	±0,085	±0,055	±0,120	±0,072
	> 1200 & ≤ 1550	±0,18	±0,090	±0,060	±0,136	±0,084

1/3 EN 10051: Please ask for conditions and price extra.

UF thicknesses adapted to each product category.

For other dimensions please contact: consultastecnicas.sestao@arcelormittal.com



(Jacques Van den Berghe)

STEELS FOR ENAMELLING

Thickness (mm)	Min width (mm)	ACB 300 EK UF
		Max width (mm)
≥ 1,20 & ≤ 1,39	845	1020
≥ 1,40 & ≤ 1,79		1425
≥ 1,80 & ≤ 1,99		1550

UF thicknesses adapted to each product category.

For other dimensions please contact: consultastecnicas.sestao@arcelormittal.com

Thickness tolerances

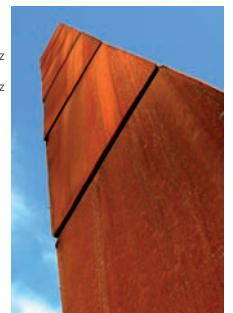
Nominal thickness (mm)	Nominal width (mm)	Tolerances as per EN 10051	ARCELORMITTAL SESTAO OFFER		Tolerances as per EN 10131 (cold rolled)	
		Normal	1/2 EN	1/3 EN	Normal	Restricted
≥ 1,20 & ≤ 1,79	≤ 1200	±0,17	±0,085	±0,055	±0,120	±0,072
	> 1200 & ≤ 1550	±0,18	±0,090	±0,060	±0,136	±0,084
≥ 1,80 & ≤ 1,99	≤ 1200	±0,17	±0,085	±0,055	±0,120	±0,072
	> 1200 & ≤ 1550	±0,18	±0,090	±0,060	±0,136	±0,084

1/3 EN 10051: Please ask for conditions and price extra.

UF thicknesses adapted to each product category.

For other dimensions please contact: consultastecnicas.sestao@arcelormittal.com

PROJECT:
Tennis Club Couder
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ATMOSPHERIC CORROSION RESISTANT STEEL

Hot rolled black and pickled coil

Thickness (mm)	Min width (mm)	ACB 355 J2W UF
		Max width (mm)
≥ 1,50 & ≤ 1,79	845	1250
≥ 1,80 & ≤ 1,99	845	1280

UF thicknesses adapted to each product category.

For other dimensions please contact: consultastecnicas.sestao@arcelormittal.com

Thickness tolerances

Nominal thickness (mm)	Nominal width (mm)	Tolerances as per EN 10051	OFERTA ARCELORMITTAL SESTAO
		Normal	1/2 EN
≥ 1,50 & ≤ 1,99	≤ 1200	±0,19	±0,095
	> 1200 & ≤ 1280	±0,22	±0,110

UF thicknesses adapted to each product category.

For other dimensions please contact: consultastecnicas.sestao@arcelormittal.com

Thickness tolerances: It might be possible to order more restricted values than 1/3 EN 10051 under request and previous agreement.

Mechanical Properties

COLD FORMING AND DRAWING STEELS

Qualities	Direction	Thickness (mm)	R _e (MPa)	R _m (MPa)	A ₈₀ (%)	Bending ratio (th.)	MP guarantee (months)
ACB 11 UF	T	1,00 – 1,49	170 – 360	≤ 440	≥ 23	≥ 1	≥ 3
ACB 11 UF CL1	T	1,00 – 1,49	170 – 360	≤ 440	≥ 23	≥ 1	≥ 3
ACB 12 UF	T	1,20 – 1,49	170 – 340	290 – 420	≥ 26	–	≥ 6
ACB 13 UF	T	1,20 – 1,49	170 – 330	300 – 400	≥ 29	–	≥ 6

ACB 11 UFCL1 – ACB 12 UF – ACB 13 UF: Suitable for galvanisation

HIGH STRENGTH LOW ALLOY STEELS

Qualities	Direction	Thickness (mm)	R _e (MPa)	R _m (MPa)	A ₈₀ (%)	MP guarantee (months)
ACB 240 UF	L	1,10 – 1,99	240 – 320	350 – 410	≥ 28	≥ 6
ACB 280 UF	L	1,10 – 1,99	280 – 375	370 – 450	≥ 26	≥ 6
ACB 315 UF	L	1,10 – 1,99	315 – 395	390 – 510	≥ 24	≥ 6
ACB 340 UF	L	1,10 – 1,99	340 – 420	420 – 540	≥ 23	≥ 6
ACB 355 UF	L	1,10 – 1,99	355 – 435	430 – 550	≥ 23	≥ 6
ACB 380 UF	L	1,35 – 1,99	380 – 460	450 – 560	≥ 20	≥ 6
ACB 420UF	L	1,35 – 1,99	420 – 500	490 – 600	≥ 19	≥ 6
ACB 460 UF	L	1,50 – 1,99	460 – 540	520 – 670	≥ 17	≥ 6
ACB 500UF	L	1,50 – 1,99	500 – 590	570 – 670	≥ 15	≥ 6
ACB 550UF	L	1,80 – 1,99	≥ 550	600 – 760	≥ 12	≥ 6

DUAL PHASE STEEL

Qualities	Direction	Thickness (mm)	R _e (MPa)	R _m (MPa)	A ₈₀ (%)	Bending ratio (th.)	MP guarantee (months)
ACB DP 600 UF	L	1,50 – 2,00	300 – 470	580 – 670	≥ 20	–	≥ 6

ENAMELLING STEEL

Qualities	Direction	Thickness (mm)	R _e (MPa)	R _m (MPa)	A ₈₀ (%)	Bending ratio (th.)	MP guarantee (months)
ACB 300 EK UF	T	1,20 – 1,99	280 – 420	360 – 500	≥ 25	–	≥ 6

ATMOSPHERIC CORROSION RESISTANT STEEL

Qualities	Direction	Thickness (mm)	R _e (MPa)	R _m (MPa)	A ₈₀ (%)	Bending ratio (th.)	MP guarantee (months)
ACB 355 J2W UF	T	1,50 – 1,99	≥ 355	510 – 680	≥ 14	–	≥ 6



Chemical properties

COLD FORMING AND DRAWING STEELS

Qualities	≤ C (%)	≤ Mn (%)	≤ P (%)	≤ S (%)	≤ Si (%)	≥ Al (%)	Galvanisation
ACB 11 UF	0,080	0,400	0,045	0,045	0,045	0,025	No
ACB 11 UF CL1	0,080	0,400	0,030	0,030	0,030	0,025	Class 1
ACB 12 UF	0,070	0,350	0,030	0,030	0,030	0,025	Class 1
ACB 13 UF	0,070	0,350	0,030	0,030	0,030	0,025	Class 1

HIGH STRENGTH LOW ALLOY STEELS

Qualities	≤ C (%)	≤ Mn (%)	≤ P (%)	≤ S (%)	≤ Si (%)	≥ Al (%)	≤ Nb (%)	≤ V (%)	Galvanisation
ACB 240 UF	0,080	0,450	0,025	0,020	0,03	0,015	0,025	0,200	Class 1
ACB 280 UF	0,080	0,450	0,025	0,015	0,03	0,015	0,025	0,200	Class 1
ACB 315 UF	0,080	0,450	0,025	0,015	0,03	0,015	0,030	0,200	Class 1
ACB 340 UF	0,080	0,450	0,025	0,015	0,03	0,015	0,030	0,200	Class 1
ACB 355 UF	0,080	0,550	0,025	0,015	0,03	0,015	0,040	0,200	Class 1
ACB 380 UF	0,080	0,850	0,025	0,015	0,03	0,015	0,065	0,200	Class 1
ACB 420 UF	0,080	0,850	0,025	0,015	0,03	0,015	0,065	0,200	Class 1
ACB 460 UF	0,080	0,850	0,025	0,015	0,03	0,015	0,080	0,200	Class 1
ACB 500 UF	0,080	1,15	0,025	0,015	0,03	0,015	0,090	0,200	Class 1
ACB 550 UF	0,080	1,10	0,025	0,015	0,03	0,015	0,090	0,200	Class 1

DUAL PHASE STEEL

Qualities	≤ C (%)	≤ Mn (%)	≤ P (%)	≤ S (%)	≤ Si (%)	≥ Al (%)	≤ Cu (%)	≤ Ni (%)	≤ Cr (%)
ACB DP 600 UF	0,080	1,45	0,025	0,025	0,500	0,015	0,180	0,150	0,850

STEEL FOR ENAMELLING

Qualities	≤ C (%)	≤ Mn (%)	≤ P (%)	≤ S (%)	≤ Si (%)	≥ Al (%)
ACB 300 EK UF	0,080	0,450	0,025	0,025	0,030	0,015

ATMOSPHERIC CORROSION RESISTANT STEEL

Qualities	≤ C (%)	≤ Mn (%)	≤ P (%)	≤ S (%)	≤ Si (%)	≥ Al (%)	≤ Cu (%)	≤ Ni (%)	≤ Cr (%)
ACB 355 J2W UF	0,080	1,15	0,035	0,025	0,500	0,015	0,550	0,550	0,800

The chemical properties given are based on cast analysis data

 Mechanical and chemical properties as per tables above

 For these qualities please contact: consultatecnicas.sestao@arcelormittal.com