



HOT ROLLED (BLACK) STRIPS/SHEETS

EN 10111 / EN 10025-2

Hot rolled steels result from a forming process that is above the recrystallization temperature.

The metallurgical structure of these low carbon steels allows for a wide range of results, from fatigue resistance and ductility to high mechanical strengths with specific properties regarding impact resistance. In addition to these mechanical properties, excellent weldability and suitability for hot-dip galvanizing are guaranteed.

Hot rolled steel sheets, because of their different chemical and mechanical properties, serve various purposes and different applications.

Versatility is one of its characteristics, allowing for large deformations and high volume production at a lower cost.

DIMENSIONAL PROPERTIES

Sheet width tolerances

Nominal width (mm)	Raw edge tolerance (mm)		Trimmed edge tolerances (mm)	
	Lower	Higher	Lower	Higher
≤ 1200	0	+ 20	0	+ 3
> 1200 ≤ 1500	0	+ 20	0	+ 5
> 1500	0	+ 25	0	+ 6

DIMENSIONAL PROPERTIES

Thickness tolerance

Nominal thickness (mm)	Tolerances for nominal width (mm)			
	≤ 1200	> 1200 ≤ 1500	> 1500 ≤ 1800	> 1800
≤ 2,0	± 0,17	± 0,19	± 0,21	-
> 2,00 ≤ 2,50	± 0,18	± 0,21	± 0,23	± 0,25
> 2,50 ≤ 3,00	± 0,20	± 0,22	± 0,24	± 0,26
> 3,00 ≤ 4,00	± 0,22	± 0,24	± 0,26	± 0,27
> 4,00 ≤ 5,00	± 0,24	± 0,26	± 0,28	± 0,29
> 5,00 ≤ 6,00	± 0,26	± 0,28	± 0,29	± 0,31
> 6,00 ≤ 8,00	± 0,29	± 0,30	± 0,31	± 0,35
> 8,00 ≤ 10,00	± 0,32	± 0,33	± 0,34	± 0,40
> 10,00 ≤ 12,50	± 0,35	± 0,36	± 0,37	± 0,43

Length tolerances

Length (mm)	Normal tolerance (mm)	
	Lower	Higher
< 2000	0	+10
≥ 2000 < 8000	0	0,5% of the length
≥ 8000	0	+40

Flatness tolerances of low carbon steel sheets

Nominal thickness (mm)	Nominal width (mm)	Flatness tolerance (mm)	Special tolerances (mm)
≤ 2,00	≤ 1200	18	9
	> 1200 ≤ 1500	20	10
	> 1500	25	13
> 2,00 ≤ 25	≤ 1200	15	8
	> 1200 ≤ 1500	18	9
	> 1500	23	12

TABLE OF DIMENSIONS

Thickness (mm)	Width (mm)											
	1000			1250			1500			2000		
	Sheets (kg)	Units p/ Bundle	Bundle (kg)	Sheets (kg)	Units p/ Bundle	Bundle (kg)	Sheets (kg)	Units p/ Bundle	Bundle (kg)	Sheets (kg)	Units p/ Bundle	Bundle (kg)
1,5	23,55	110	2591	36,8	70	2576	52,99	50	2649			
2	31,4	80	2512	49,06	50	2453	70,65	35	2473			
2,3	36,11	70	2528	56,42	40	2257	81,25	30	2437			
2,5	39,25	64	2512	61,33	40	2453	88,31	30	2649			
3	47,1	55	2591	73,59	34	2502	105,98	25	2649	188,4	13	2449
4	62,8	40	2512	98,13	26	2551	141,3	18	2543	251,2	10	2512
5	78,5	32	2512	122,66	21	2576	176,63	14	2473	314	8	2512
6	94,2	27	2543	147,19	17	2502	211,95	12	2543	376,8	7	2638
8	125,6	20	2512	196,25	13	2551	282,6	10	2826	502,4	5	2512
10	157	16	2512	245,31	10	2453	353,25	8	2826	628	4	2512
12	188,4	14	2638	294,38	9	2649	423,9	6	2543	753,6	3	2261
Length ref. (mm)	2000			2500			3000			4000		

STEEL GRADES

Steel Grade	Chemical properties									Mechanical properties								
	Nominal thicknesses < 16mm % by mass									R _{eh} mín. Thickness (mm)	R _m Thickness (mm)	L ₀ = 80mm Thickness (mm)				L ₀ = 5,65 Thickness (mm)		
	C % máx.	Si % máx.	Mn % máx.	P % máx.	S % máx.	N % máx.	Cu % máx.	CEV % máx.		≤ 16	< 3	≥ 3 ≤ 100	≤ 1	> 1 ≤ 1,5	> 1,5 ≤ 2	> 2 ≤ 2,5	> 2,5 ≤ 3	> 3 ≤ 40
S185	-	-	-	-	-	-	-	-	-	185	310 a 540	290 a 510	l 10 t 8	l 11 t 9	l 12 t 10	l 13 t 11	l 14 t 12	l 18 t 16
S235JR	0,19	-	1,50	0,045	0,045	0,014	0,60	0,35	235	360 a 510	360 a 510	17	18	19	20	21	26	
S235J0	0,19	-	1,50	0,040	0,040	0,014	0,60	0,35	235	360 a 510	360 a 510	-	-	-	-	-	-	
S235J2	0,19	-	1,50	0,035	0,035	-	0,60	0,35	235	360 a 510	360 a 510	15	16	17	18	19	24	
S275JR	0,24	-	1,60	0,045	0,045	0,014	0,60	0,40	275	430 a 580	410 a 560	15	16	17	18	19	23	
S275J0	0,21	-	1,60	0,040	0,040	0,014	0,60	0,40	275	430 a 580	410 a 560	-	-	-	-	-	-	
S275J2	0,21	-	1,60	0,035	0,035	-	0,60	0,40	275	430 a 580	410 a 560	13	14	15	16	17	21	
S355JR	0,27	0,60	1,70	0,045	0,045	0,014	0,60	0,45	355	510 a 680	470 a 630	14	15	16	17	18	22	
S355J0	0,23	0,60	1,70	0,040	0,040	0,014	0,60	0,45	355	510 a 680	470 a 630	-	-	-	-	-	-	
S355J2	0,23	0,60	1,70	0,035	0,035	-	0,60	0,45	355	510 a 680	470 a 630	-	-	-	-	-	-	
S355K2	0,23	0,60	1,70	0,035	0,035	-	0,60	0,45	355	510 a 680	470 a 630	12	13	14	15	16	20	

Steel Grade	Chemical properties				Mechanical properties						
	Nominal thicknesses % by mass				R_{el} (MPa) máx.	R_m (MPa) máx.	$L_0 = 80\text{mm}$			$L_0 = 5,65$ vS_0	
	C % máx.	Mn % máx.	P % máx.	S % máx.	Thickness (mm)		Thickness (mm)				
				1 ≤ 2	2 ≤ 11		1 < 1,5	1,5 < 2	2 < 3	3 ≤ 11	
DD11	0,12	0,60	0,045	0,045	170-360	170-340	440	22	23	24	28
DD12	0,10	0,45	0,035	0,035	170-340	170-320	420	24	25	26	30
DD13	0,08	0,40	0,030	0,030	170-330	170-310	400	27	28	29	33

SUPPLY CONDITIONS

PACKAGING

The material is available in strips/coils, strapped with bands of steel and, in the case of shaped sheets, in bundles wrapped in protective film. To facilitate the handling of bundles (loading/unloading), they are supported by wooden beams.

LABELING

Each strip/coil/bundle is supplied with a label, ensuring proper identification of the product and its traceability.

CERTIFICATE

Each order will be accompanied by the corresponding inspection certificate according to EN 10204, in accordance with the product's applicable standard.

SUPPLY OPTIONS

SPECIAL TOLERANCES

THICKNESS, LENGTH AND WIDTH:

This product is supplied with thickness, width, and length tolerances (in the case of shaped sheets) in accordance with the applicable standard. Special tolerances may be available upon request. Edge trimming possible.

STEEL GRADES:

The possibility of supplying other steel grades not mentioned above can be evaluated upon request.

COATINGS AND SURFACE TREATMENTS

The products are supplied in accordance with the applicable standards, with the possibility of additional treatments/coatings as previously requested at the time of the inquiry/order, under the customer's responsibility.

LABORATORY TESTS

Possibility of requesting specific laboratory tests, not foreseen in the applicable standard (anisotropy, salt fog, metallography, thickness elongation, among others)

WRAPPING AND PACKAGING

The strips/coils/bundles can be configured according to the client's specifications, as requested at the time of the inquiry/order. Possibility of using packaging with anticorrosion protection (VCI).

APPLICATION AREAS



INDUSTRY



CONSTRUCTION



ENERGY



ENGINEERING
AND ARCHITECTURE