



**BEAMS, SHEETS AND PROFILES**

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AND PROFILES**



**COMFER S.P.A.** - Commercio e prelaborazione prodotti siderurgici - PRADAMANO (UD)





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## CONTROL CERTIFICATES EDITED

ACCORDING TO THE TESTS CARRIED OUT BY THE COMPANY AND SPECIFIED IN UNI EN 10204

### 2.1. CERTIFICATE OF CONFORMITY TO ORDER "2.1."

Document where the manufacturer certifies that the supplied products are conform to that agreed upon ordering, without indicating any test result.

The certificate of conformity upon ordering "2.1" is a document edited according to non specific checks.

### 2.2. CONTROL CERTIFICATE "2.2."

Document where the manufacturer certifies that the supplied products are conform to that agreed upon ordering and that supplies test results on the basis of the non-specific checks.

### 2.3. TEST CERTIFICATE "3.1.B."

Document where the manufacturer certifies that the supplied products are conform to that agreed upon ordering and that supplies test results on the basis of the non-specific checks.

This type of certificate can be issued by the manufacturer having an authorised control service, hierarchy independent from the production services.

Quality	ReH (N/mm <sup>2</sup> ) min	Rm (N/mm <sup>2</sup> ) THICKNESS (mm)		A% min THICKNESS (mm)		Resilience (1) min	
		< 3,00	≥ 3,00	< 3,00	≥ 3,00	Temp. °C	J
S185	185	310 + 540	290 + 510	12	16	-	-
S235JR	235	360 + 510	340 + 470	19	24	+ 20	27
S2325J0	235	360 + 510	340 + 470	19	24	0	27
S235J2G4	235	360 + 510	340 + 470	19	24	-20	27
S235J2G4 al Cu	235	360 + 510	340 + 470	19	24	-20	27
S275JR	275	430 + 580	410 + 560	16	20	+ 20	27
S275J0	275	430 + 580	410 + 560	16	20	0	27
S275J2G3	275	430 + 580	410 + 560	16	20	- 20	27
S275J2G4	275	430 + 580	410 + 560	16	20	- 20	27
S275J2G4 al Cu	275	430 + 580	410 + 560	16	20	- 20	27
S355JR	355	510 + 680	490 + 630	16	20	+ 20	27
S355J0	355	510 + 680	490 + 630	16	20	0	27
S355J2G3	355	510 + 680	490 + 630	16	20	- 20	27
S355J2G4	355	510 + 680	490 + 630	16	20	- 20	27
S355J2G4 al Cu	355	510 + 680	490 + 630	16	20	- 20	27
S355K2G3	355	510 + 680	490 + 630	16	20	- 20	40

EN 10025-90 + A1-93	ITALY UNI 7070	GERMANY DIN 17100	FRANCE AFNOR NF A 35.501	G.B. B.S. 4360	SPAIN UNE 36080	USA ASTM
S185	Fe 320	St 33	A 33	-	A 310-0	-
S235JR	Fe 360 B	St 37-2	E 24-2	40 A	-	A 283 GR.C/GR.B
S235J0	Fe 360 C	St 37-3U	E 24-3	40 C	AE 235 C	-
S235J2G4	-	-	-	-	-	-
S275JR	Fe 430 B	St 44-2	E 28-2	43 B	AE 275 B	A 36/A 283 D
S275J0	Fe 430 C	St 44-3U	E 28-3	43 C	AE 275 C	-
S275J2G3	Fe 430 D	St 44-3N	E 28-4	43 D	AE 275 D	A 633 GR. A
S275J2G4	-	-	-	-	-	-
S355JR	Fe 510 B	-	E 36-2	50 B	AE 355 B	A 572 GR.50/A 678 GR.A
S355J0	Fe 510 C	St 52-3U	E 36-3	50 C	AE 355 C	-
S355J2G3	Fe 510 C	St 52-3N	-	50 D	AE 355 D	-
S355J2G4	-	-	-	-	-	-
S355K2G3	Fe 510DD	-	E 36-4	50 DD	-	-
S355K2G4	-	-	-	-	-	-

Quality	C % max	Min % max	Si % max	P % max	S % max	N % max	Cu %
S185	-	-	-	-	-	-	-
S235JR	0,170	1,400	-	0,045	0,045	0,009	-
S235J0	0,170	1,400	-	0,040	0,040	0,009	-
S235J2G4	0,170	1,400	-	0,035	0,035	-	-
S235J2G4 al Cu	0,170	1,400	-	0,035	0,035	-	0,250 + 0,400
S275JR	0,210	1,500	-	0,045	0,045	0,009	-
S275J0	0,180	1,500	-	0,040	0,040	0,009	-
S275J2G3	0,180	1,500	-	0,035	0,035	-	-
S275J2G4	0,180	1,500	-	0,035	0,035	-	-
S275J2G4 al Cu	0,180	1,500	-	0,035	0,035	-	0,250 + 0,400
S355JR	0,240	0,160	0,550	0,045	0,045	-	-
S355J0	0,200	0,160	0,550	0,040	0,040	0,009	-
S355J2G3	0,200	1,600	0,550	0,035	0,035	-	-
S355J2G4	0,200	1,600	0,550	0,035	0,035	-	-
S355J2G4 al Cu	0,200	1,600	0,550	0,035	0,035	-	0,250 + 0,400
S355K2G3	0,200	1,600	0,550	0,035	0,035	-	-

The symbol “S” stands for Steels for structural uses.

### Mechanical features:

the number following the Group, is the minimum prescribed unit load yield, expressed in MPa.

J and K express the energy resilience values, respectively of 27 joule and 40 joule

The following letter and number indicate the temperature at which the resilience test was carried out:

R = temperature  $+23^{\circ} \pm 5^{\circ}$

0 = temperature  $0^{\circ}$

2 = temperature  $-20^{\circ}$

4 = temperature  $-40^{\circ}$

### Physical features:

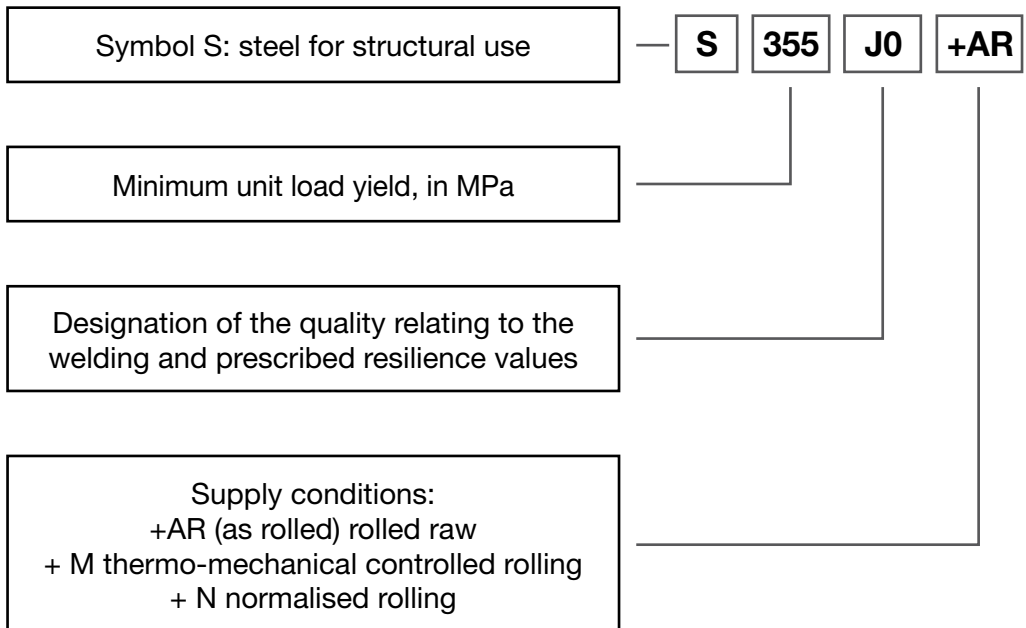
L for low temperatures

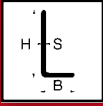
M thermo-mechanical controlled rolling

N normalised rolling

W with protection against atmospheric corrosion

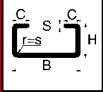
### Summary of the synthetic designation layout v:





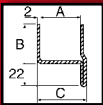
## "L"-SHAPED PROFILES

DIMENSIONS B x H	THICKNESS mm - WIGHT Kg/ml				
	1,5	2	2,5	3	4
15 x 30	0,51	0,66	0,83	0,99	
20 x 40		0,94	1,14	1,34	
25 x 50		1,14	1,42	1,70	
30 x 50		1,22	1,52	1,81	
30 x 60			1,72	2,04	
40 x 80				2,75	3,64



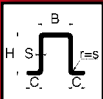
## "C"-SHAPED PROFILES

DIMENSIONS B x H	THICKNESS mm - WIGHT Kg/ml				
	1,5	2	2,5	3	3,5
30 x 20	x 7,5	0,81			
30 x 30	x 10	1,22	1,60	1,96	2,38
40 x 40	x 10	1,58	2,07		
40 x 40	x 15	1,63	2,23	2,75	3,25



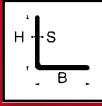
## PANEL COVER PROFILE

THERMO PANELS FROM	A	B	C
mm 25	26,5	30	32,5
mm 30	31,5	35	37,5
* mm 35	36,5	40	42,5
* mm 40	41,5	45	47,5
mm 50	52,0	55	58,0



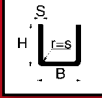
## SYMMETRICAL OMEGA

DIMENSIONS B x H x C	THICKNESS mm - WIGHT Kg/ml				
	1,5	2	2,5	3	3,5
30 x 40 x 20	1,63	2,10			
25 x 50 x 15	1,68	2,18	2,65		
30 x 50 x 15	1,74	2,26	2,75		
30 x 50 x 20	1,86	2,42	2,94		
40 x 60 x 25		3,05	3,73	4,36	
40 x 80 x 25		3,67	4,51	5,32	
50 x 100 x 30		4,66	5,70	6,73	
60 x 100 x 30			5,39	6,97	
60 x 120 x 30		5,41	6,67	7,91	
80 x 120 x 40			7,45	8,85	
80 x 150 x 45			10,50	12,14	13,75



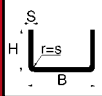
## ANGLE PROFILES

DIMENSIONI B x H	THICKNESS mm - WIGHT Kg/ml				
	1,5	2	2,5	3	4
10 x 10	0,20				
15 x 15	0,31	0,40			
20 x 20	0,43	0,56	0,69		
25 x 25	0,55	0,72	0,90	1,03	
30 x 30	0,67	0,88	1,10	1,25	
35 x 35		1,03	1,30	1,53	
40 x 40		1,20	1,45	1,75	
45 x 45		1,35	1,69	2,00	
50 x 50		1,51	1,87	2,20	
60 x 60			2,27	2,70	



## EQUAL SIDES "U"-SHAPED PROFILES

DIMENSIONS B x H	THICKNESS mm - WIGHT Kg/ml					
	1,5	2	2,5	3	3,5	4
15 x 15	0,47	0,60				
20 x 20	0,65	0,85				
25 x 25	0,83	1,07	1,31	1,53		
30 x 30	1,00	1,31	1,61	1,89		
35 x 35	1,20	1,56	1,92	2,25		
40 x 40		1,79	2,21	2,61	2,98	3,35
45 x 45		2,02	2,52	2,96	3,40	3,82
50 x 50		2,26	2,79	3,32	3,80	4,29



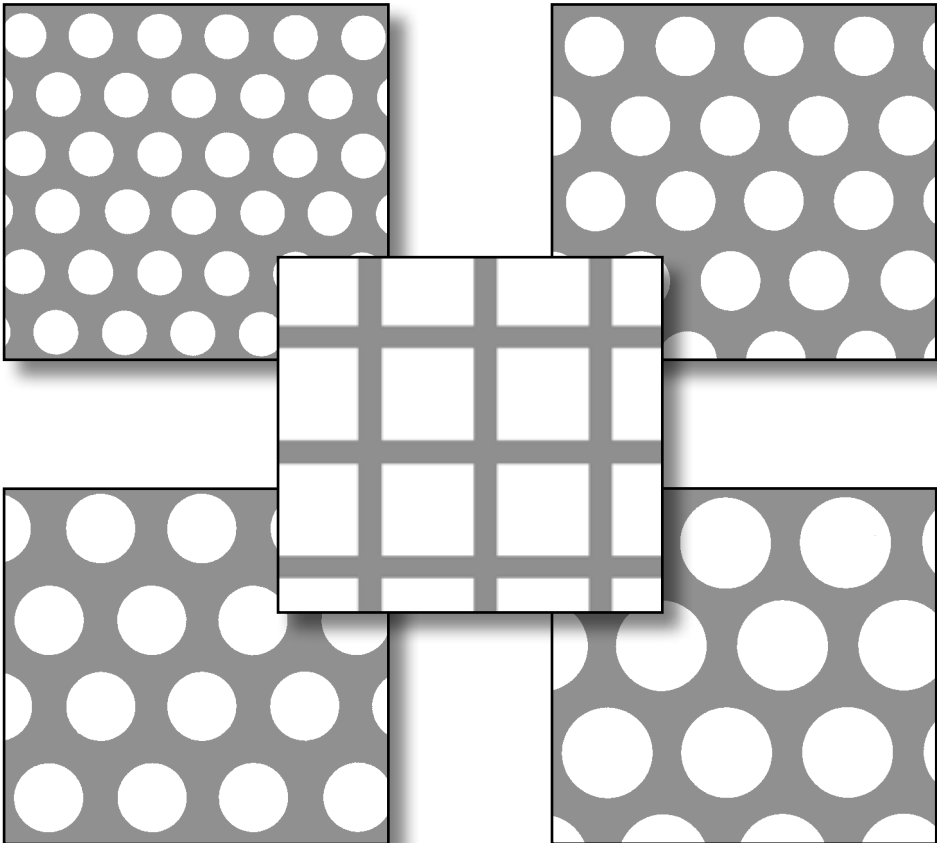
## UNEQUAL SIDES "U"-SHAPED PROFILES

DIMENSIONS B x H	THICKNESS mm - WIGHT Kg/ml				
	1,5	2	2,5	3	4
30 x 15	0,64	0,85			
30 x 20	0,77	1,00	1,22	1,43	
40 x 20	0,89	1,16	1,42	1,67	
40 x 30	1,12	1,47	1,81	2,14	
50 x 25		1,47	1,81	2,14	
50 x 30		1,64	2,04	2,43	3,18
50 x 40		1,94	2,40	2,85	3,70
60 x 30		1,87	2,20	2,61	3,39
60 x 40		2,2		3,3	
80 x 40		2,41	3,00	3,58	4,73
100 x 50		3,04	3,77	4,50	5,90
120 x 60				5,44	7,15

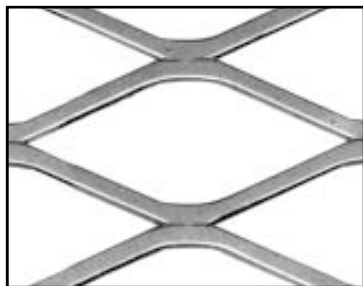
← Available upon request for the above-said profiles, also the omega carrier.

# DRILLED AND STREAKED SHEETS

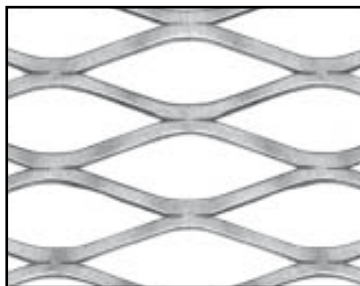
READY DRILLED SHEETS IN SHEETS OF 2000 X 1000 MM										
THICKNESS mm	HOLE Ø									
	2	3	4	5	6	8	10	12	15	20
1		●	●	●	●	●	●			
1,5	●	●	●	●	●	●	●		●	
2		●	●	●	●	●	●			
3				●		●	●			
4					●	●	●			
5						●	●		●	●
	HOLE ☐									
1			●			●				
1,5			●			●				



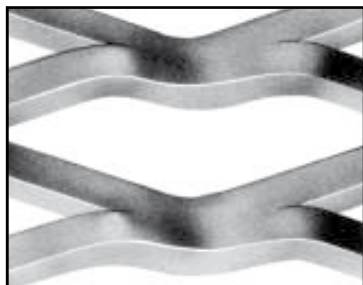
## DRILLED AND STREADED SHEETS



Rolls staked sheets S220 \*



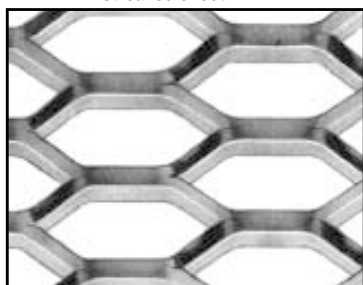
Rolls staked sheets/FG\* S17



Staked sheet F1



Staked sheet F4



E3 staked sheets in sheets \*



SP 2A staked sheets in sheets \*



### AVAILABLE TRADE FORMATS:

- 2000 x 1000
- 2500 x 1500
- 3000 x 1500
- Rolls h 1000 /1250 /1500 x 8 ÷10000



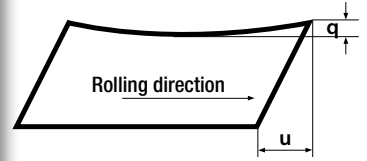
# SHEET METAL AND HEAVY PLATES THICKNESS TOLERANCES EN 10051

Nominal thickness	Tolerances for a nominal length			
	≤ 1200	>1200 ≤ 1500	>1500 ≤ 1800	>1800
≤ 2,00	± 0,17	± 0,19	± 0,21	
> 2,00 ≤ 2,5	± 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 ≤ 10,0	± 0,32	± 0,33	± 0,34	± 0,40
>10,0 ≤ 12,5	± 0,35	± 0,36	± 0,37	± 0,43
>12,5 ≤ 15,0	± 0,37	± 0,38	± 0,40	± 0,46
> 15,0 ≤ 25,0	± 0,40	± 0,42	± 0,45	± 0,50

Nominal width	Tolerances according to EN 10051				
	raw edges		sheared edges		
	lower	higher	lower	higher	symmetric
≤ 1200	0	+ 20	0	+ 3	± 1
> 1200 ≤ 1500	0	+ 20	0	+ 5	± 1
> 1500	0	+ 25	0	+ 6	± 1

Nominal length	According to EN 10051	edged sheets
≤ 2000	- 0 + 10	± 1 mm.
> 2000 ≤ 8000	- 0 + 0,005 x nominal length	± 0,1 % length
> 8000	- 0 + 40	

Nominal thickness	Nominal width	Planarity tol.	Special planarity tol.
≤ 2,00	≤ 1200	18	9
	> 1200 ≤ 1500	20	18
	> 1500	25	13
> 2,00 ≤ 25	≤ 1200	15	8
	> 1200 ≤ 1500	18	9
	> 1500	23	12



### Longitudinal camber

“q” max 6 mm for a length 1° 2 m.

“q” max 0,3% for lengths < 2 m.

“q” max 0,3% for lengths < 2 m.

### Displacement

The “u” displacement must not be greater than 1% of the effective width of the sheet.

The “u” perpendicularity is the orthogonal projection of a transversal edge on a longitudinal edge.

### Scaled sheet

Thickness nominale	Tolerances for a nominal Length			
	≤ 1200	>1200 ≤ 1500	>1500 ≤ 1800	>1800
≤ 2,00	± 0,13	± 0,14	± 0,16	
> 2,00 ≤ 2,5	± 0,14	± 0,16	± 0,17	± 0,19
> 2,50 ≤ 3,00	± 0,15	± 0,17	± 0,18	± 0,20
> 3,00 ≤ 4,00	± 0,17	± 0,18	± 0,20	± 0,20
> 4,00 ≤ 5,00	± 0,18	± 0,20	± 0,21	± 0,22
> 5,00 ≤ 6,00	± 0,20	± 0,21	± 0,22	± 0,23
> 6,00 ≤ 8,00	± 0,22	± 0,23	± 0,23	± 0,26

Nominal length	Higher tolerances
< 2000	+6
≥ 2000	0,3% length

Nominal width	Higher tolerances
width ≤ 1200	+4
1200 < width ≤ 1500	+5
width > 1500	+6

# SHEET METAL AND HEAVY PLATES

Cold sheet in DC01 quality according to Standard EN10131

Nominal Thickness	Tolerances for a nominal Length		
	≤ 1200	>1200 ≤ 1500	>1500
> 1,00 ≤ 1,20	± 0,07	± 0,08	± 0,10
> 1,20 ≤ 1,60	± 0,09	± 0,11	± 0,12
> 1,60 ≤ 2,00	± 0,12	± 0,13	± 0,14
> 2,00 ≤ 2,50	± 0,14	± 0,15	± 0,16
> 2,50 ≤ 3,00	± 0,17	± 0,18	± 0,18

Nominal length	Higher tolerances
< 2000	+6
≥ 2000	0,3% length

Nominal width	Higher tolerances
width ≤ 1200	+4
1200 < width ≤ 1500	+5
width > 1500	+6

**Cold sheet in Dx51D+Z quality according to Standard EN10142**

Nominal Thickness	Tolerances for a nominal Length		
	≤ 1200	>1200 ≤ 1500	>1500
1,00 < t ≤ 1,20	± 0,08	± 0,09	± 0,11
1,20 < t ≤ 1,60	± 0,11	± 0,13	± 0,14
1,60 < t ≤ 2,00	± 0,14	± 0,15	± 0,16
2,00 < t ≤ 2,50	± 0,16	± 0,17	± 0,18
2,50 < t ≤ 3,00	± 0,19	± 0,20	± 0,20
3,00 < t ≤ 5,00	± 0,22	± 0,24	± 0,25
5,00 < t ≤ 6,50	± 0,24	± 0,25	± 0,26

Nominal length	Higher tolerances
< 2000	+6
2000 < lugh. ≤ 8000	0,3% lugh.
< 8000	come da normativa

Nominal width	Higher tolerances
600 < largh. ≤ 1200	+5
1200 < largh. ≤ 1500	+6
1500 < largh. ≤ 1800	+7
largh. > 1800	+8

## BLACK SHEETS - DKP GALVANISED SHINY

THICKNESS mm	WEIGHT Kg/m <sup>2</sup>	DIMENSIONS mm			THICKNESS mm	WEIGHT Kg/m <sup>2</sup>
		2000 x 1000	2500 x 1250	3000 x 1500		
		WEIGHT Kg				
0,3	2,36	4,72			35	275
0,4	3,14	6,28			40	314
0,5	3,93	7,86			45	354
0,6	4,71	9,42			50	393
0,7	5,50	11,00			55	432
0,8	6,28	12,60	19,6	28	60	471
1,0	7,85	15,40	24,5	35	65	511
1,2	9,42	18,80	29,5	42	70	550
1,5	11,8	23,60	36,7	53	75	589
1,8	14,1	28,20	44,2	64	80	628
2,0	15,7	31,40	49	71	85	668
2,2	17,3	34,50	54	78	90	707
2,5	19,6	39,30	61	88	95	748
3,0	23,6	47,10	73	106	100	785
3,5	27,5	55,00	86	124	105	825
4	31,4	62,80	98	131	110	864
5	39,4	78,50	123	176	120	942
6	47,1	94,20	147	212	130	1022
7	55,0	110	172	247	140	1100
8	62,8	126	196	282	150	1178
9	70,6	141	221	318	160	1258
10	78,5	157	245	353	170	1338
12	94,2	188	294	424	180	1414
15	118	236	368	530	190	1492
18	141	282	442	636	200	1570
20	157	314	490	706		
25	196	392	613	882		
30	236	472	738	1060		

## BULB STEEL PLATE HOT LAMINATE UNI 4630

THICKNESS mm	WEIGHT Kg/m <sup>2</sup>	DIMENSIONS mm		
		2000x1000	2500x1250	3000x1500
		WEIGHT Kg		
2,5	21,6	43,2	67,5	97,2
3	25,5	51,0	79,7	114,8
4	33,6	67,2	105	151,2
5	41,6	83,2	130	187,2
6	49,7	99,4	155,3	223,7
7	57,6	115,2	180	259,3
8	65,7	131,4	205,3	296
10	81,1	162,0	253	305
12	96,7	193,0	305	435

## STREAKED STEEL PLATE HOT LAMINATE UNI 3151

THICK- NESS (1) mm	DIMENSIONS mm WEIGHT Kg				
	WEIGHT Kg/m <sup>2</sup>	1000 x 2000	1250 x 2500	1500 x 3000	1500 x 6000
3,0	28,6	57,2	89,4	128,7	257,4
4,0	36,5	7,30	114,0	164,3	328,4
5,0	44,3	88,6	138,5	199,4	398,7
6,0	52,1	104,2	163,0	234,5	468,9
7,0	60,0	120,0	187,5	270,0	540,0
8,0	67,8	135,6	211,9	305,1	610,2
10,0	83,8	167,2	261,2	376,2	752,4
12,0	99,1	198,2	309,7	446,0	891,9

(1) THICKNESS IS EXCLUDED FROM STREAKING