

# SPECIAL PROFILES

BORON FLATS - THN MINING PROFILES - PLOUGHSHARE BLADES - RAILWAY CONNECTIONS



## TECHNICAL SPECIFICATIONS



### TYPE:

Hot-Rolled Bars of rectangular cross-section (Flats)



### STEEL GRADE:

- 15B35 modified  
- 30Mn5 modified



### FORM - DIMENSIONS:

Straight bars with width from 80 to 180mm and thickness from 25 to 90mm



### LENGTH - TOLERANCE:

Bar length 6 to 12m with tolerance + / - 75mm

### PACKING - WEIGHT:

Bundles weighing approximately 5,200kg

### DIMENSIONS - WEIGHT - TOLERANCES:

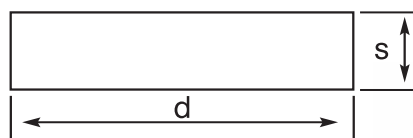
According to DIN 1017

# BORON FLATS



Boron steel flat bars are used to applications where high strength, good bendability and weldability is required.

They also offer good impact toughness and high yield strength. Hot-Rolled Boron Flats are used in the fork-lift industry and especially in the production of forks.



## SALES NETWORK

[www.sidenor.gr](http://www.sidenor.gr) • [www.stomana.bg](http://www.stomana.bg)

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## STEEL CHEMICAL COMPOSITION & MECHANICAL PROPERTIES

STEEL GRADE	CHEMICAL COMPOSITION						
	C (%)	Mn (%)	Si (%)	Cr (%)	S (%) max	P (%) max	B (%)
15B35 Mod.	0.27-0.35	1.00-1.60	0.15-0.35	0.25-0.65	0.025	0.020	0.0005-0.0050
30Mn5 Mod.	0.30-0.34	1.25-1.50	0.15-0.35	0.30-0.50	0.020	0.025	0.0005-0.0040

STEEL GRADE	MECHANICAL PROPERTIES					
	NOMINAL THICKNESS S (mm)	SAMPLE	YIELD STRENGTH (N/mm <sup>2</sup> ) min	TENSILE STRENGTH (N/mm <sup>2</sup> )	ELONGATION 5d <sub>0</sub> (%) min	CHARPY -V-NOTCH IMPACT-j (TEST at-20°C)
15B35 Mod.	25-90	QUENCHED & TEMPERED	827	950 min	12	27 j min
		AS ROLLED	—	700 min	—	—
30Mn5 Mod.	25-90	QUENCHED & TEMPERED	750	900-1.100	—	27 j min

## HARDENABILITY, HRC

STEEL GRADE	THICKNESS S (mm)	DISTANCE (mm)									
			1.5	5.0	9.0	13.0	15.0	20.0	25.0	30.0	35.0
15B35 Mod.	Up to 50	max	58	—	—	55	—	50	—	—	—
		min	51	—	—	41	—	33	—	—	—
	51-70	max	58	—	—	—	55	53	—	—	—
		min	51	—	—	—	41	33	—	—	—
	>70	max	58	—	—	—	—	55	51	—	—
		min	51	—	—	—	—	41	34	—	—
30Mn5 Mod.	25-90	max	55	55	54	53	52	48	44	39	36
		min	47	46	42	36	33	27	23	20	—

## DIMENSIONS, THICKNESSES AND TOLERANCES

WIDTH d (mm)	ALLOWED WIDTH DEVIATION (mm)	THICKNESS S (mm)											
		25	30	35	40	45	50	60	65	70	75	80	90
		PERMISSIBLE THICKNESS DEVIATION (mm)											
		± 1.0			± 1.5								
NOMINAL WEIGHT (Kg/m)													
80	1.5	—	—	—	25.12	—	—	—	—	—	—	—	—
100		—	23.55	27.47	31.40	35.72	39.25	47.10	—	—	—	—	—
110	2.0	—	—	—	34.54	—	—	—	—	—	—	—	—
120		—	—	—	37.68	42.39	47.10	—	—	—	—	—	—
125	2.5	—	—	—	—	—	49.06	58.87	—	—	—	—	—
130		25.51	30.61	—	—	—	51.02	61.23	—	—	—	—	—
140		—	—	—	43.96	49.45	54.95	65.94	—	—	—	—	—
150		—	—	—	—	52.98	64.76	70.65	76.54	82.42	88.31	—	—
180		—	—	—	—	63.58	—	—	—	98.91	105.97	—	127.17

