

Precision Steel

precidur[®] HLB 38 / 38MnB5

Product information for hot-rolled precision strip made in Hohenlimburg



thyssenkrupp

Version 01/22

Boron-alloyed heat-treatable steel

BU Precision Steel supplies boron-alloyed heat treatable steels in accordance with DIN EN ISO 683, DIN EN 10083 and Stahl-Eisen list. They are a cost-effective alternative for substituting of heat-treatable steels and offer significantly better cold formability due to their low carbon content.

Depending on grade and application, boron-alloyed steels can be fine blanked without prior annealing. Boron steels offer good processing and forming properties even in the hot-rolled condition.

precidur[®]

- is used in virtually all industry sectors.
- offers close thickness tolerances similar to cold-rolled strip, optimum surface finishes and consistent material properties over the entire strip length and width.
- is characterized by its symmetrical strip profiles and mill edges.
- is the sum of all the experience we have gained in more than 100 years of manufacturing and processing steel.

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Technical features

Boron-alloyed heat-treatable steel

Material number: 1.5532 / 1.5537

Material name: 38MnB5 / 36MnB4

Proprietary brand: precidur® HLB 38

Delivery specification: DIN EN ISO 683-2, DIN EN 10083

Application: Heat-treatable steel for parts in machinery and plant construction

Chemical composition

Ladle analysis mass percentages	C [%]	Si [%]	Mn [%]	P [%]	S [%]	Cr [%]	Al [%]	Ti [%]	B [%]
min.	0.33	-	1.15	-	-	0.10	0.020	0.020	0.0008
max.	0.40	0.40	1.45	0.025	0.008	0.25	0.060	0.060	0.0050

Further special analyses available

Mechanical properties

Longitudinal to rolling direction	Tensile strength R _m [MPa]	Elongation A ₅ [%]
Rolled condition	Ø 700	min. 18
GKZ annealed	max. 590	min. 24

Possible delivery options

Options	Mill edge (NK) Cut edge (GK)	pickled		unpickled	slit	trimmed	cut to length	annealed	not annealed
		✓	or	✓	✓	✓	✓	✓	✓
precidur® HLB 38	NK or GK	✓	or	✓	✓	✓	✓	✓	✓

General thickness tolerances

Strip thickness [mm]	1.5 – 2.54	2.55 – 4.03	4.04 – 6.03	6.04 – 8.03	8.04 – 9.03	9.04 – 11.03	11.04 – 14.03	14.04 – 16.00
Standard tolerances [mm]	± 0.04	± 0.04	± 0.05	± 0.055	± 0.06	± 0.07	± 0.08	± 0.10
Special tolerances [mm]	± 0.03	± 0.035	± 0.04	± 0.045	± 0.05	± 0.055	± 0.06	± 0.07

General delivery options

Coil inner diameter: standard 508 mm / optional 610 mm

Coil outer diameter: max. 1,890 mm

Coil weight: max. 20.5 kg/mm strip width

Strip width*: max. 720 mm

Strip thickness*: 1.5 – 16 mm

* May be subjected to restrictions.

Application examples for boron-alloyed heat-treatable steel



Special mill grades feature unique thyssenkrupp properties. Other terms and conditions of supply not specified here will be based on the applicable specifications. The specifications used will be those valid on the date of publication of this product information.

General information:

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