

Precision Steel

precidur[®] HBS 900

Product information for hot-rolled precision strip made in Hohenlimburg



thyssenkrupp

Version 9/21

Bainitic steel

The HBS grades from BU Precision Steel are steels with a quasi-single-phase bainitic microstructure.

They are highly suitable for critical forming operations due to their favorable yield-to-tensile ratio. These steels are optimized in particular for the forming of punched or cut edges.

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

Bainitic steel

Material number: 1.0999

Proprietary brand: precidur® HBS 900

Delivery specification: in accordance with Stahl-Eisen list

Application: Ultrahigh-strength steels with first class edge formability, extended fatigue strength, very good weldability and high bending capacity

Special feature: Despite very high strengths, bainitic rolled microalloyed steels are suitable for enhanced forming. This is evident among other things in very hole expansion values.

Chemical composition

Ladle analysis mass percentages	C [%]	Si [%]	Mn [%]	P [%]	S [%]	Cr [%]	Al [%]	Ti [%]	Nb [%]	Mo [%]	Cu [%]	B [%]
min.	-	-	-	-	-	-	0.015	-	-	-	-	-
max.	0.18	1.00	2.20	0.025	0.010	1.00	0.100	0.25	0.25	1.00	0.20	0.0050

Mechanical properties

Longitudinal to rolling direction	Yield strength R _{p0,2} [MPa]	Tensile strength R _m [MPa]	Elongation A ₅ [%]	Elongation A ₈₀ [%]	Hole expansion Longitudinal and transverse specimens
Rolled condition	650 - 850	850 - 1050	min . 12*	min. 9*	min 20 % Ø 27 %

* The elongation is inadequate for showing the good forming behavior of HBS 900.

Possible delivery options

Options	Mill edge (NK) Cut edge (GK)	pickled	unpickled	slit	trimmed	Cut to length
precidur® HBS 900	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 bainitic 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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