

Docol PHS 2000

General Product Description

Hardenable boron steel for the automotive industry. Docol PHS 2000 steels are optimized for parts and components that are manufactured by direct or indirect hot stamping. Applications include safety parts such as bumper systems, door impact beams, and B-pillar reinforcements.

Dimension range

Cold rolled / UC: thickness 1.00-2.10 mm, width up to 1515 mm.

Hot rolled / UC*: thickness 2.00-4.00 mm, width up to 1600 mm.

Slit strip and cut to length sheets are available upon request.

*Available upon request.

Mechanical Properties

Steel grade	Standard	Condition	Test direction	Yield Strength R _{p0.2} Typical (MPa)	Tensile strength R _m Typical (MPa)	Elongation A ₈₀ Typical (%)	Elongation A ₅ Typical (%)
Docol PHS FH 2000	SSAB	Full Hard	T	980	1100	4	-
Docol PHS CR 2000	SSAB	As delivered Annealed	T	330	530	26	-
Docol PHS CR 2000	SSAB	Hot Stamped*	T	1380	2040	5	-
Docol PHS HR 2000	SSAB	Hot Rolled	T	490 ¹⁾	690	18	22
Docol PHS HR 2000+A	SSAB	Annealed	T	330 ¹⁾	540	27	31
Docol PHS HR 2000	SSAB	Hot Stamped*	T	1360 ¹⁾	2040	6	7

* Properties depend on the process.

¹⁾ R_{eH} is used instead of R_{p0.2}

Chemical Composition (Ladle analysis)

Steel grade	C (%)	Si (%)	Mn (%)	P (max %)	S (max %)	Cr (max %)	B (%)	Nb+Ti (max %)
Docol PHS CR 2000	0.30 - 0.38	0.15 - 0.35	1.10 - 1.50	0.025	0.005	0.35	0.0010 - 0.0050	0.2
Docol PHS HR 2000	0.30 - 0.38	0.15 - 0.35	1.10 - 1.50	0.025	0.005	0.35	0.0010 - 0.0050	0.2

Tolerances

Cold rolled (UC): Tolerances in accordance to EN10131.

Hot rolled (UC): Tolerances in accordance to EN10051.

Customized dimensional and shape tolerances available upon request.

Surface Treatments

Uncoated (UC): available as oiled

All surface treatments are in accordance with RoHS directive (2011/65/EU) and do not contain Chromium VI (Cr⁶⁺). Surface treatments provide only temporary surface protection during transportation and storage. In order to avoid corrosion damages, care must be taken to keep the products dry during transportation and storage. If they become wet, they must be separated and situated so that they are dried quickly.

Fabrication and Other Recommendations

For information concerning fabrication, see SSAB's brochures on www.ssab.com or consult Tech Support, techsupport@ssab.com.

Appropriate health and safety precautions must be taken when bending, welding, cutting, grinding or otherwise working on the product.

Contact Information

www.ssab.com/contact