

Docol PHS 1500

General Product Description

Hardenable boron steel for the automotive industry. Available as both hot rolled and cold rolled. Docol PHS 1500 steels are specially developed for parts and components that are manufactured by direct or indirect hot stamping. Applications include safety parts such as door impact beams, bumper systems and B-pillar reinforcements.

Dimension Range

Cold rolled / UC: thickness 0.70-3.00 mm, width up to 1500 mm.

Hot rolled / UC: thickness 2.00-12.00 mm, width up to 1600 mm.

Slit strip and cut to length sheets are 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 1500	SSAB	Full Hard	T	960	1060	4	-
Docol PHS CR 1500	SSAB	As delivered Annealed	T	340	480	28	-
Docol PHS CR 1500	SSAB	Hot Stamped*	T	1200	1590	6	-
Docol PHS HR 1500	SSAB	Hot Rolled	T	570 ¹⁾	715	20	22
Docol PHS HR 1500+A	SSAB	Annealed	T	350 ¹⁾	530	25	33
Docol PHS HR 1500	SSAB	Hot Stamped*	T	1200 ¹⁾	1590	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 (%)
Docol PHS CR 1500	0.20 - 0.25	0.15 - 0.35	1.00 - 1.35	0.025	0.005	0.35	0.0020 - 0.0050
Docol PHS HR 1500	0.20 - 0.25	0.15 - 0.35	1.00 - 1.35	0.025	0.005	0.35	0.0020 - 0.0050

Tolerances

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

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

Customized dimensional and shape tolerances are 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