DOCOL®
THE AUTOMOTIVE STEEL

Docol 550LA

General Product Description

The Docol 550LA steels are high-strength low-alloy steels that offer consistent properties for modern, rapid production methods. It offers consistent properties for modern, rapid production methods.Typical applications include bent profiles. Docol HR550LA-UC can after agreement be adapted and delivered as dual certified with S550MC according to EN 10149-2:2010.

Dimension range

Docol HR550LA / UC: thickness 2.00-6.00 mm, width up to 1610 mm, length up to 16000 mm.

Docol HR550LA / GI: thickness 2.00-2.50 mm, width up to 1170 mm, length up to 6000 mm.

Slitting to narrow coils and cutting to sheets are available upon request.

Mechanical Properties

Steelgrade	Thickness (mm)	Standards	Coating	Yield strength $R_{p0,2}$ (MPa)	Tensile strength R_m (MPa)	Elongation A_{80} (min %)	Min. inner bending radius for 90 °
Docol HR550LA	2.00- 6.00	VDA 239-100:2016	UC	550- 670	610- 750	12	1.0xt
Docol HR550LA	2.00- 2.50	VDA 239-100:2016	GI	550- 670	610- 750	12	1.0xt [1)]

The mechanical properties are tested longitudinal to the rolling direction.

1) The value apply to steel when bending angle is 90°. In some cases tight bending radius may cause micro-cracking of the coating in the bend area. Where design permits, users are encouraged to employ larger radius.

Chemical Composition

Steel-grade	Product Type	C (max %)	Si (max %)	Mn (max %)	P (max %)	S (max %)	Al (min %)	Ti (max %)	Nb (max %)	Nb+Ti (max %)	Cu (max %)
Docol HR 550LA	Uncoated	0.12	0.10	1.80	0.025	0.025	0.015	0.15	0.09	-	0.20
Docol HR 550LA	Metal coated	0.12	0.60	1.80	0.030	0.025	0.015	0.15	0.10	-	0.20

Tolerances

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

Hot-dip metal coated: (GI) Tolerances in accordance to EN10143.

Customized dimensional and shape tolerances are available on request.

Coatings and surface treatments

Coatings

The metal coatings options for Docol products include:

Hot dip zinc coating (GI) consists almost entirely of zinc (>99%). It is lead free, resulting in a small zinc spangle size. The coating provides good corrosion protection.

Grade specific availability of metal coated Docol products are given in the Mechanical properties table, coating column.

SSAB

Type	Coating class	Standard	Closest in EN10346, informative	Coating mass per side, Single spot test (g/m^2)	Thickness per side, informative (μm)	Density (g/cm^3)	Surface quality (U = unexposed, E = exposed
GI	40	VDA239-100	Z100	40- 60 (1)	5,6- 8,5	7,1	U
GI	50	VDA239-100		50- 70 (1)	7,0- 9,9	7,1	U
GI	60	VDA239-100	Z140	60- 90	8,5- 12,7	7,1	U
GI	70	VDA239-100		70- 100	9,9- 14,1	7,1	U
GI	85	VDA239-100		85-115	12,0- 16,2	7,1	U
GI	115	VDA239-100	Z275	115-155	16,2- 21,8	7,1	U

(1) For hot-dipped (GI) hot rolled (HR) grades, the coating mass tolerance is increased to 30 g/m^2 by increasing the upper limit.

In addition to these coating masses, asymmetric coatings and OEM coating specifications are available upon request.

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.

Surface coating	Available surface treatment
GI	Chemically passivated (C)
GI	Oiled (O)
GI	Chemically passivated and oiled (CO)
GI	Unprotected (U)
UC (Hot-rolled)	Oiled (Only for pickled steel)
UC (Hot-rolled)	Unprotected

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