DOCOL®
THE AUTOMOTIVE STEEL

Docol 1100M

General Product Description

A martensitic steel with advanced high-tensile strength, Docol 1100M helps improve crashworthiness and ensure a lightweight design and cost-efficient production methods for the automotive industry. Docol is one of the strongest cold-rolled advanced high-strength steels on the market and has become the material of choice for automotive applications such as side impact beams, bumpers and structural components.

Dimension range

Docol CR860Y1100T-MS / UC & EG: thickness 0.50-2.00 mm, width up to 1527 mm, length up to 8500 mm.

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

Mechanical Properties

Steelgrade	Thickness (mm)	Coating	Yield strength $R_{p0,2}$ (MPa)	Tensile strength R_m (MPa)	Elongation A_{80} (min %)	Min. inner bending radius for 90 °
Docol CR860Y 1100T-MS	0.50- 2.00	UC, EG	860- 1100	1100- 1300	3	3.5xt

The mechanical properties are tested longitudinal to the rolling direction.

Chemical Composition

C (max %)	Si (max %)	Mn (max %)	P (max %)	S (max %)	Al (min %)	Nb+Ti (max %)	Cr+Mo (max %)	B (max %)	Cu (max %)
0.13	0.40	1.90	0.020	0.010	0.010	0.10	1.00	0.010	0.20

Tolerances

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

Customized dimensional and shape tolerances are available on request.

Coatings and surface treatments

Coatings

Electrogalvanized coating (EG) is applied continuously by electro deposition. The coating consists of zinc (>99%). Electrogalvanized steel is characterized by its excellent surface quality and uniform coating thickness.

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

Type	Coating class	Standard	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
EG (2)	ZE25/25	EN 10152	12-	1,7-	7,14	U
EG (2)	ZE50/50	EN 10152	29-	4,1-	7,14	U
EG (2)	ZE75/75	EN 10152	47-	6,6-	7,14	U
EG (2)	ZE100/100	EN 10152	65-	9,1-	7,14	U

(2) EG products can be supplied with single side coating if agreed up on at the time of order, Such coating are designated ZE25/00, etc.

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

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Surface treatments

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
EG	Oiled
EG	Chemically passivated
EG	Phosphated
EG	Chemically passivated and oiled
EG	Unprotected
UC (Cold-rolled)	Oiled
UC (Cold-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