

# Docol 1200M

## General Product Description

Docol 1200M is available both as hot rolled and cold rolled. Docol 1200M martensitic steel 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 CR950Y1200T-MS / UC & EG: thickness 0.50-2.00 mm, width up to 1527 mm, length up to 8500 mm.

Docol HR900Y1180T-MS / UC: thickness 2.00-4.00 mm, width up to 1440 mm, length up to 16000 mm.

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

## Mechanical Properties

Steelgrade	Thickness (mm)	Standards	Coating	Test direction	Yield strength $R_{p0.2}$ (MPa)	Tensile strength $R_m$ (MPa)	Elongation $A_{80}$ (min %)	Min. inner bending radius for 90°
Docol CR 950Y1200T-MS	0.50- 2.00	-	UC, EG	Transversal	950-	1200- 1400	3	3.5xt
Docol HR 900Y1180T-MS	2.00- 4.00	VDA 239-100:2016	UC	Longitudinal	900- 1150	1180- 1400	5	-

## Chemical Composition

Steel-grade	Product Type	C (max %)	Si (max %)	Mn (max %)	P (max %)	S (max %)	Al (%)	Nb+Ti (max %)	Cr+Mo (max %)	V (max %)	B (max %)	Cu (max %)
Docol CR950Y 1200T-MS	UC, EG	0.14	0.40	2.00	0.020	0.010	0.015-	0.10	-	-	-	-
Docol HR900Y 1180T-MS	UC	0.20	0.80	2.50	0.050	0.010	0.015-2.00	0.25	1.20	0.22	0.005	0.20

## Tolerances

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

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

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 <sup>2</sup> )	Thickness per side, informative (μm)	Density (g/cm <sup>3</sup> )	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.

### 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
UC (Hot-rolled)	Oiled
UC (Hot-rolled)	Unprotected

### Fabrication and Other Recommendations

For information concerning fabrication, see SSAB's brochures on [www.ssab.com](http://www.ssab.com) or consult Tech Support, [techsupport@ssab.com](mailto: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](http://www.ssab.com/contact)