

Docol 800CP

General Product Description

Docol 800CP is intended for designs where high structural strength and energy absorption are desired, suitable for cold formed safety components and crash-relevant equipment within the automotive and transport industries.

Dimension Range

Cold rolled / UC: thickness 0.50-2.10 mm, width up to 1527 mm.

Cold rolled / GI, GA, ZA: thickness 0.80-2.50 mm, width up to 1460 mm.

Hot rolled / UC: thickness 2.00-4.00 mm, width up to 1500 mm.

Hot rolled / GI: thickness 2.00-3.50 mm, width up to 1400 mm.

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

Grade and coating specific restrictions on available dimensions may occur.

Mechanical Properties

Steel grade	Standard	Coating	Test direction	Yield strength R _{p0.2} (MPa)	Tensile strength R _m (MPa)	Elongation A ₈₀ (min %)	Elongation A ₅ (min %)	BH ₂ (min MPa)	Hole expansion ratio (min %)	Hole expansion ratio (% typical)
Docol CR 570Y780T-CP	VDA 239-100: 2016	UC, GI, GA*, ZA*	L	570 - 720	780 - 920	10 ¹⁾	-	30	-	-
Docol HR 660Y760T-CP	VDA 239-100: 2016	UC, GI	L	660 - 820	760 - 960	10	13	30	-	-
Docol HR800HER-75	SSAB	UC	L	660 - 820	760 - 960	11	14	-	45	75
Docol HR800HER-100	SSAB	UC	L	660 - 820	760 - 960	12	15	-	65	100
Docol Roll 800	SSAB	UC	T	600 - 750	800 - 950	10	-	-	-	-

*Available upon request.

¹⁾ For GA coatings the minimum elongation value is reduced by 2 units.

Chemical Composition (Ladle analysis)

Steel grade	Coating	C (max %)	Si (max %)	Mn (max %)	P (max %)	S (max %)	Al (%)	Ti+Nb (max %)	Cr+Mo (max %)	B (max %)	Cu (max %)
Docol CR 570Y780T-CP	UC, GI, GA, ZA	0.18	1.00	2.50	0.050	0.010	0.015 - 1.00	0.15	1.00	0.005	0.20
Docol HR 660Y760T-CP	UC, GI	0.18	1.00	2.20	0.050	0.010	0.015 - 1.2	0.25	1.00	0.005	0.20
Docol HR800HER-100	UC	0.18	1.00	2.20	0.050	0.010	0.015 - 1.2	0.25	1.00	0.005	0.20
Docol HR800HER-75	UC	0.18	1.00	2.20	0.050	0.010	0.015 - 1.2	0.25	1.00	0.005	0.20
Docol Roll 800	UC	0.16	0.40	1.80	0.020	0.010	0.015 -	0.10	-	-	-

Tolerances

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

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

Hot-dip galvanized (GI, GA, ZA): Tolerances in accordance to EN10143.

Customized dimensional and shape tolerances are available upon request.

Coatings and surface treatments

Coatings

The metal coating 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.

Galvanized coating (GA) is a zinc-iron alloy coating having an iron content of approximately 10%. Galvanized is produced by post-heat treatment in continuous hot-dip coating process. Galvanized provides excellent resistance weldability and corrosion protection of painted products.

Galfan coating (ZA) is a zinc-aluminium alloy coating having the eutectic composition approximately of 95% Zn and 5% Al. Galfan is produced in continuous hot-dip coating process. Galfan has better anticorrosive and forming properties than conventional hot-dip zinc coating (GI).

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 coatings for Docol products is given in the Mechanical properties table (Coating).

Coating type	Coating class	Standard	Closest in EN10346, informative	Coating mass per side, Single spot test (g/m ²)	Thickness per side, informative (µm)
GI	40/40	VDA239-100	Z100	40 - 60 ¹⁾	5,6 - 8,5
GI	50/50	VDA239-100		50 - 70 ¹⁾	7,0 - 9,9
GI	60/60	VDA239-100	Z140	60 - 90	8,5 - 12,7
GI	70/70	VDA239-100		70 - 100	9,9 - 14,1
GI	85/85	VDA239-100		85 - 115	12,0 - 16,2
GI	115/115	VDA239-100	Z275	115 - 155	16,2 - 21,8
GA	40/40	VDA239-100	ZF100	40 - 60 ¹⁾	5,6 - 8,5
GA	50/50	VDA239-100	ZF120	50 - 80	7,0 - 11,3
ZA	95	Upon request	ZA95		7 -
ZA	130	Upon request	ZA130		10 -
EG	ZE25/25	EN 10152	-	12 -	1,7 -
EG	ZE50/50	EN 10152	-	29 -	4,1 -
EG	ZE75/75	EN 10152	-	47 -	6,6 -
EG	ZE100/100	EN 10152	-	65 -	9,1 -

¹⁾ For hot-dip galvanized (GI, GA, ZA) hot rolled grades, the coating mass tolerance is increased to 30 g/m² by increasing the upper limit.

Docol metal coated products are available with surface quality for unexposed applications.

In addition to these coating masses, OEM specific coatings and single sided EG coatings are available upon request.

Surface treatments

Uncoated (UC): available as oiled

Hot-dip galvanized (GI, GA, ZA): available as oiled and/or chemically passivated

Electrogalvanized (EG): available as oiled and/or chemically passivated or phosphated

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