

Docol 980CP

General Product Description

Docol 980CP is made for cold forming and allows for a tight radius on high-strength applications. These steels are characterized by both a high yield strength and an improved cleanliness, which allows for a tight radius.

Dimension range

Docol CR780Y980T-CP / UC: thickness 0.50-2.10 mm, width up to 1527 mm, length up to 8500 mm.

Docol CR800Y980T-CP / UC: thickness 0.50-2.10 mm, width up to 1527 mm, length up to 8500 mm.

Docol CR780Y980T-CP / GI: thickness 0.80-2.00 mm, width up to 1460 mm, length up to 6000 mm. (upon request)

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

Mechanical Properties

| Steelgrade | Standards | Coating | Yield strength $R_{p0.2}$ (MPa) | Tensile strength R_m (MPa) | Elongation A_{80} (min %) | BH ₂ (min MPa) |
|-------------------------|----------------------|---------------|---------------------------------------|------------------------------------|--------------------------------|------------------------------|
| Docol CR780Y 980T-CP | VDA 239- 100:2016 | UC | 780- 950 | 980- 1140 | 6 | - |
| Docol CR800Y 980T-CP | - | UC | 800- 950 | 980- 1140 | 6 | - |
| Docol CR780Y 980T-CP | VDA 239- 100:2016 | GI*, GA*, ZA* | 780- 950 | 980- 1140 | 6 | 30 |

The mechanical properties are tested longitudinal to the rolling direction.

* Available on request.

Chemical Composition

| Steel-grade | Product Type | C (max %) | Si (max %) | Mn (max %) | P (max %) | S (max %) | Al (%) | Nb+Ti (max %) | Cr+Mo (max %) | B (max %) | Cu (max %) |
|----------------------------|-----------------|--------------|---------------|---------------|--------------|--------------|----------------|------------------|------------------|--------------|---------------|
| Docol CR780Y 980T-CP | Uncoat ed | 0.16 | 0.40 | 1.80 | 0.050 | 0.010 | 0.015- 1.00 | 0.15 | 1.00 | 0.005 | 0.20 |
| Docol CR800Y 980T-CP | Uncoat ed | 0.16 | 0.40 | 1.80 | 0.050 | 0.010 | 0.015- 1.00 | 0.15 | 1.00 | 0.005 | 0.20 |
| Docol CR780Y 980T-CP | Metal coated | 0.23 | 1.00 | 2.70 | 0.050 | 0.010 | 0.015- 1.00 | 0.15 | 1.00 | 0.005 | 0.20 |

Tolerances

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

Hot-dip metal coated: (GI, GA & ZA) 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.

Galvannealed coating (GA) is a zinc-iron alloy coating having an iron content of approximately 10%. Galvannealed is produced by post-heat treatment in continuous hot-dip coating process. Galvannealed 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).

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

| 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 |
| GA | 40 | VDA239-100 | ZF100 | 40- 60 (1) | 5,6- 8,5 | 7,1 | U |
| GA | 50 | VDA239-100 | ZF120 | 50- 80 | 7,0- 11,3 | 7,1 | U |
| ZA | 95 | Upon request | ZA95 | | 7 | 6,6 | U |
| ZA | 130 | Upon request | ZA130 | | 10 | 6,6 | U |

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

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 |
|------------------|--------------------------------------|
| GI, ZA, GA | Chemically passivated (C) |
| GI, ZA, GA | Oiled (O) |
| GI, ZA, GA | Chemically passivated and oiled (CO) |
| GI, ZA, GA | Unprotected (U) |
| 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