

A STEEL MENU FOR INDOOR AND OUTDOOR APPLICATIONS

Cold- and hot-rolled steel strip

Enametable steels Data Sheet | Page 1/4 | 06/2024

ENAMELABLE STEELS

Cold- and hot-rolled steels for easy processing

voestalpine offers a wide range of hot-rolled and cold-rolled enametable steels for all common enameling processes.

The enamel can be applied in both wet and powder enameling processes. Depending on the steel grade, our steels can be enameled on one or both sides. Due to their excellent coating adhesion and outstanding cold forming properties, high-quality and durable products can be produced.



Outdoor applications, e.g. facade cladding

Applications for indoor and outdoor components

- » Sanitary facilities such as boilers, bathtubs, shower trays
- » Kitchen equipment such as ovens, stoves, pots
- » Industrial applications such as facade cladding, heat exchangers, large containers (silos), road signs

Convincing advantages

- » Sustainability through durable products
- » Suitable for high surface requirements
- » Excellent resistance to fish scaling
- » Excellent cold formability
- » Excellent coating adhesion



PREMIUM QUALITY
WITH REDUCED
CARBON FOOTPRINT

COLD-ROLLED STEELS

Chemical composition

Heat analysis in mass %

Steel grade	Designation of standard EN 10209	C max.	Ti max.	Mn max.	P max.	S max.
DC01EK	DC01EK	0.08	-	0.6	0.045	0.05
DC04EK	DC04EK	0.08	-	0.5	0.030	0.05
DC06EK	DC06EK	0.02	0.3	0.5	0.020	0.05
DC07EK	DC07EK	0.02	0.3	0.4	0.020	0.05
DC03ED TiVac	-	0.02	0.3	0.4	0.035	0.05
DC04ED TiVac	-	0.02	0.3	0.4	0.030	0.05

Mechanical properties: tensile test

Transverse to rolling direction

Steel grade	Designation of standard EN 10209	0.2% yield strength $R_{p0.2}$ [MPa]	Tensile strength R_m [MPa]	Total elongation A_{80} min. [%]	Vertical anisotropy r_{90} min.
DC01EK	DC01EK	140 – 270	270 – 390	30	-
DC04EK	DC04EK	140 – 220	270 – 350	36	-
DC06EK	DC06EK	120 – 190	270 – 350	38	1.8
DC07EK	DC07EK	100 – 170	270 – 350	40	2.0
DC03ED TiVac	-	120 – 240	270 – 370	34	-
DC04ED TiVac	-	120 – 210	270 – 350	38	-

Dimensions and forms of delivery

Cold-rolled enameling steels can be supplied as coils or as preprocessed material (slit or cut to length).

The following dimensions are available:

Thickness [mm]	Width [mm]	Strip width min. [mm]	Mass/width [kg/mm]
0.5 – 1.6	900 – 1,600	30	18 – 20

Available combinations of widths and thicknesses vary depending on the steel grade.

Dimension tolerances

The dimensional tolerances are compliant with EN 10131. Narrower thickness tolerances are possible upon request.

Surface finish

Cold-rolled enamelled steels are available in compliance with EN 10209.

HOT-ROLLED STEELS

Chemical composition

Ladle analysis in mass %, based on voestalpine special grade

Steel grade	C max.	Si max.	Mn max.	P max.	S max.	Al max.	Cu max.	Ti max.	B max.	Nb+V+Ti max.
DD11CCE	0.08	0.05	0.5	0.02	0.025	0.02	0.10	0.05	0.004	0.10
DD15CCE	0.01	0.05	0.3	0.02	0.025	0.02	0.10	0.10	0.004	0.15
S240CCE	0.10	0.25	0.6	0.02	0.025	0.02	0.10	0.10	0.004	0.15
S355CCE	0.12	0.30	2.1	0.02	0.015	0.02	0.15	0.20	0.005	0.22
S380CCE	0.12	0.30	2.1	0.02	0.015	0.02	0.15	0.20	0.005	0.22

Mechanical properties: tensile test

Transverse to rolling direction

Steel grade	Standard data in as-delivered condition				Values according to simulation annealing at 830 °C			
	Yield strength $R_{p0,2}$	Tensile strength R_m	Total elongation [%] min.		Yield strength $R_{p0,2}$	Tensile strength R_m	Total elongation [%] min.	
	[MPa]	[MPa]	A_{80}	A_5	[MPa]	[MPa]	A_{80}	A_5
DD11CCE	200 – 300	300 – 400	25	30	≥ 170	≥ 250	25	30
DD15CCE	140 – 240	260 – 360	28	33	≥ 100	≥ 250	28	33
S240CCE	240 – 360	360 – 450	22	27	≥ 240	≥ 360	22	27
S355CCE	600 – 770	650 – 800	-	14	≥ 355	≥ 500	-	16
S380CCE	620 – 790	670 – 820	-	12	≥ 380	≥ 550	-	15

Measurement of fracture elongation A80 for thicknesses < 3 mm, A5 for thicknesses ≥ 3 mm

Dimensions and forms of delivery

Hot-rolled enameling steels can be supplied as coils or as preprocessed material (slit or cut to length).

The following dimensions are available:

Thickness [mm]	Width [mm]	Strip width min. [mm]	Mass/width [kg/mm]
1.8 – 20	900 – 1,750	30	18 – 20

Available combinations of widths and thicknesses vary depending on the steel grade.

Depending on the dimensions and strength, we also supply pickled, oiled and trimmed.

MULTIPLE CERTIFICATIONS



Premium quality with reduced carbon footprint

Hot-rolled steel strip – greentec steel Edition

Max. carbon footprint 1.95 kg CO₂e per kg of steel ¹⁾

Cold-rolled steel strip – greentec steel Edition

Max. carbon footprint 1.97 kg CO₂e per kg of steel ¹⁾

¹⁾ per EN 15804+A2 (EPD methodology) cradle to gate

All products, dimensions and steel grades listed in each voestalpine supply range are available as greentec steel Edition.

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