

Let your ideas fly!



Martensitic steels

Clearly classic among high-strength grades with tensile strengths up to 1300 MPa

Martensitic steels made by voestalpine are part of the ultralights field of expertise. The property profile of martensitic steels is characterized by highest strengths without any compromise of excellent formability during bending and roll forming. The very high resistance to edge cracking during the forming of stamped edges is a result of the single-phase martensitic microstructure. The special annealing and cooling technologies of voestalpine result in excellent strip flatness in martensitic steels. The unique property profile of martensitic steels makes them highly suitable for applications in light-weight automotive design and the manufacture of safety parts and crash-relevant components. Depending on the specific corrosion resistance requirements, martensitic steels are available as bright-finished (UC) and electrolytically galvanized (EG).

Convincing advantages

- » Available with minimum tensile strengths from 1100 to 1300 MPa
- » High ratio of yield to tensile strength
- » Excellent cold formability in bending and roll-forming operations
- » Best forming properties of punched edges based on high resistance to edge cracking
- » Best strip flatness
- » Good weldability
- » High crash energy absorption
- » Corrosion-resistant based on electrogalvanizing



Premium quality
with reduced carbon footprint

martensitic steels

greentec steel

Chemical composition

Heat analysis in mass %

Steel grade	Standard	C max.	Si max.	Mn max.	P max.	S max.	Al min.	Cr + Mo max.	Ti + Nb max.	B max.	Cu max.
Pursuant to VDA 239-100 and voestalpine special grades											
CR860Y1100T-MS	voestalpine	0.20	0.50	2.20	0.020	0.025	0.010	1.00	0.15	0.010	0.20
CR1030Y1300T-MS	VDA 239-100	0.28	1.00	2.00	0.020	0.025	0.010	1.00	0.15	0.010	0.20

Mechanical properties: Tensile test

Steel grade	Standard	Test direction	0.2 % yield strength $R_{p0.2}$ [MPa]	Tensile strength R_m min. [MPa]	Total elongation A_{80} min. ¹⁾ [%]	n value $n_{10-20/Ag}$ min.	BH ₂ min. [MPa]
Pursuant to VDA 239-100 and voestalpine special grades							
CR860Y1100T-MS	voestalpine	longitudinal	860 - 1120	1100 - 1320	3	-	30
CR1030Y1300T-MS	VDA 239-100	longitudinal	1030 - 1330	1300 - 1550	3	-	30

¹⁾ Thickness and coating limitations pursuant to VDA 239-100 and voestalpine special grades.

Coatings and available dimensions

Available thicknesses [mm] per coating

Steel grade	Standard	UC	EG
Pursuant to VDA 239-100 and voestalpine special grades			
CR860Y1100T-MS	voestalpine	1.0 - 1.8	1.0 - 1.75
CR1030Y1300T-MS	VDA 239-100	1.0 - 1.6	1.0 - 1.6

Further dimensions upon request.

OUR PATH TO A GREENER FUTURE

Premium products in the greentec steel Edition

With greentec steel, voestalpine is pursuing an ambitious step-by-step plan in the long-term decarbonization of steel production. The declared objective is to achieve carbon-neutral production by 2050, and the initial steps have already been taken. Process-optimized production operations already prevent up to 10% of the direct CO₂ emissions at the Linz site. The material and processing properties of the steel are not affected in any way in this production route. Each voestalpine steel strip product is available in premium quality in the greentec steel Edition with a reduced carbon footprint and unique benefits.



Premium quality with reduced carbon footprint

Cold-rolled steel strip – greentec steel Edition

Max. carbon footprint 2.15 kg CO₂e per kg of steel ¹⁾

Hot-dip galvanized steel strip – greentec steel Edition

Max. carbon footprint 2.30 kg CO₂e per kg of steel ¹⁾

Electrogalvanized steel strip – greentec steel Edition

Max. carbon footprint 2.30 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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