

Laser cutting steels

LASER 250 C PLUS S 235 J2C+N*

LASER 420 MC PLUS S 420 MC**

(*) EN 10025 - 2:2004

(**) EN 10149 - 2

High quality steel with excellent laser cutting and mechanical properties, particularly suitable for cold forming and welding.

Applications

- Laser cutting
- Cold forming of precision components

Mechanical properties

STEEL GRADE	THK mm	Tensile strength		Yield point N/mm ²	Elongation A% max	IMPACT TEST	
		N/mm ²	min			TEMP °C	KV Long.
LASER 250 C PLUS plates	8-30	360	460	240	29	-20	40
LASER 250 C PLUS coils	3-15	360	460	240	30	-20	40
LASER 420 MC PLUS plates	10-25	490	620	420	21	-20	40
LASER 420 MC PLUS coils	2-12	490	620	420	21	-60	40

Chemical composition - %

STEEL GRADE	C max	Si max	Mn max	S max	P max	CE max
LASER 250 C PLUS plates	0.12	0.03	1.30	0.020	0.020	0.30
LASER 250 C PLUS coils	0.12	0.03	1.30	0.020	0.020	0.30
LASER 420 MC PLUS plates	0.12	0.03	1.60	0.015	0.020	0.38
LASER 420 MC PLUS coils	0.12	0.03	1.50	0.015	0.020	0.28

Available thickness

plates	8 mm - 30 mm
coils	3 mm - 15 mm

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Comparative Standards

STEEL GRADE	EN 10125-2	EN 10149-2
LASER 250 C PLUS LASER 420 MC PLUS	S 235 J2C+N -	- S 420 MC

Cold longitudinal formability/transverse

STEEL GRADE	MINIMUM BENDING RADIUS		
	plates	coils	
	<i>thk</i> 8-20 mm	<i>thk</i> 3-6 mm	<i>thk</i> 7-15 mm
LASER 250 C PLUS LASER 420 MC PLUS	1.0 A 1.0 A	0,5 A 1.0 A	0.8 A 1.0 A

A= thickness in mm

Laser cutting quality

Optimized chemical composition, clean surface, rust free, good and uniform flatness, minimised residual tensions, make LASER an ideal steel for laser cutting.

The laser cutting speed for LASER is about 30% higher than ordinary steels. The low silicon and sulphur content allows a particularly good cutting edge and burr-free sections.

This difference is even improving on low thicknesses. Low contents of silicon, manganese, carbon and impurity of phosphorus and sulphur permit to obtain very good cut edges.

Such precision in cutting allows to improve possibilities of end uses.

Weldability

LASER, high quality fine-grained steels with low Carbon Equivalent are ideal for welding.

Formability

The uniformity of the quality, low carbon and sulphur content make LASER easily formable. Minimized bending radius makes the plates bending easier on both rolling and width directions and allows cold forming.

Galvanizing

Thanks to the low silicon content LASER are extremely suitable for hot dip galvanizing.

Cutting parameters

The uniformity of the quality simplify the regulation of the cutting machine parameters.