

Ympress® Laser S420MC

Strong, consistent and highly formable

Ympress® Laser S420MC is a hot-rolled, high-strength, low-alloy steel. It is optimised for efficient laser cutting and post-cut processing. The product combines high strength with outstanding formability and consistent quality. It is ideal for applications where low weight, high strength and exceptional formability are critical factors. These include automotive seating components, truck and trailer components, tow hooks, industrial silos, lifting and excavating and agricultural machinery.

Ympress® Laser S420MC offers exceptional flatness, minimised internal stress and high-quality surfaces. Consistent product characteristics ensure fast, reliable automated processing for increased productivity and improved part yield. A clean-cut edge – even at high cutting speeds - allows simple release of cut parts and reduces post-cut work. Suitable also for conventional cutting methods, Ympress® Laser S420MC can be easily welded and galvanised.

Mechanical properties (parallel to the rolling direction)

	Min. yield strength	Min. - Max. tensile strength	Elongation after fracture A			Min. bending radius
			t < 3mm	3mm ≥ t < 5mm	t ≥ 5mm	Transverse* ≤ 180°
	R _{eh} in MPa	R _m in MPa	L ₀ = 80mm	L ₀ = 5.65√S ₀ mm (%)	L ₀ = 5.65√S ₀ mm (%)	(t)
Typical value	460	545	26	27	26	-
Guaranteed	≥ 420	500-600	18	22	21	0
EN-10149-2	≥ 420	480-620	16	19	19	0.5

* ≤ 180° bend radius, measured transverse to the rolling direction

Chemical composition (% by weight)

	C	Mn	Si	P	S*	Al _{tot}	Nb	V	Ti	Mo	Ceq**	Ceq**
											< 6mm	> 6mm
Guaranteed	≤ 0.10	≤ 1.50	≤ 0.030	≤ 0.020	≤ 0.008	≥ 0.015	≤ 0.08	-	≤ 0.05	-	0.29	0.31
EN 10149-2	≤ 0.12	≤ 1.60	≤ 0.50	≤ 0.025	≤ 0.015	≥ 0.015	≤ 0.09	≤ 0.20	≤ 0.15	-	-	-

* extra low sulphur content - max 0.005% available to special order

**Ceq is a typical value

Impact strength (optional and parallel to the rolling direction)

	Impact test
	J at -20°C
Guaranteed*	6-12mm ≥ 40
Typical value	130

* In accordance with EN 10149 the impact values above are only guaranteed if accepted on order

Tolerances on thickness

Ympress® Laser products comply to ½ EN 10051:2010. Tighter tolerances are available on request.

Certification

A 2.2 certificate is issued as standard with Ympress® Laser products . Other certificate types are available on request.

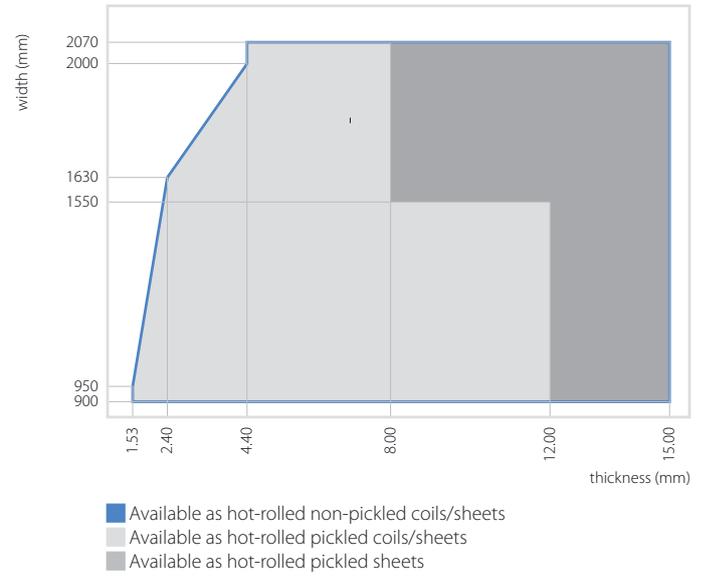
Product support

We want you to get the best from Ympress® Laser products . Our technical engineers and trained sales staff are always happy to answer your questions on steel selection and application. Our engineers are available to assist you with process and product design optimisation for improved throughput, yield and end-product performance.

Ympress® Laser range

Steel grades:	E250C, S355MC, S420MC
Thickness range: (sheets)	1.5 - 15mm (up to 20mm on request)
Width range:	900 - 2070mm
Surface treatment:	Hot rolled dry, pickled and oiled

Available dimensions of Ympress® Laser S420MC



www.tatasteeleurope.com

Tata Steel

PO Box 10.000
1970 CA IJmuiden
The Netherlands
T: +31 (0)251 496126
E: strip.enquiries@tatasteel.com
www.tatasteeleurope.com/strip

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