

Ympress® Laser S355MC

Strong, consistent and highly formable

Ympress Laser S355MC 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 suitable for a wide range of applications including pressed components for automotive seating, fuel systems and radiators. It is also a popular choice for lifting and excavating where high strength and toughness are paramount.

Ympress Laser S355MC 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 S355MC can be easily welded and galvanised.

Mechanical properties (parallel to the rolling direction)

	Min. yield strength R_{eH} in MPa	Min. - Max. tensile strength R_m in MPa	Elongation after fracture A			Min. bend test diameter	
			t < 3mm $L_0 = 80\text{mm}$	3mm ≤ t < 5mm $L_0 = 5.65\sqrt{S_0}\text{mm}$ (%)	t ≥ 5mm $L_0 = 5.65\sqrt{S_0}\text{mm}$ (%)	at 180°*	at 90°**
Typical value	390	485	30	32	27	-	-
Guaranteed	≥ 355	450-550	22	27	24	0 t	0 t
EN-10149-2	≥ 355	430-550	19	23	23	0.5 t	-

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

** ≤ 90° bend radius, measured in all directions

t = material thickness in mm

Chemical composition (% by weight)

	C	Mn	Si	P	S	Al _{tot}	Nb	V	Ti	Mo	Ceq*	Ceq*	
												< 6mm	> 6mm
Guaranteed	≤ 0.10	≤ 1.40	≤ 0.030	≤ 0.020	≤ 0.005	≥ 0.015	≤ 0.05	-	≤ 0.025	-	0.17	0.29	
EN 10149-2	≤ 0.12	≤ 1.50	≤ 0.50	≤ 0.025	≤ 0.020	≥ 0.015	≤ 0.09	≤ 0.20	≤ 0.15	-	-	-	

*Ceq is a typical value

Impact strength (optional and parallel to the rolling direction)

	Impact test J at -20°C
Guaranteed*	< 6 mm** ≥ 40
	6-20 mm ≥ 40
Typical value	120

* In accordance with EN 10149-2 the impact values above are only guaranteed if accepted on order

**No impact tests are carried out for thicknesses < 6mm

Tolerances on thickness

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

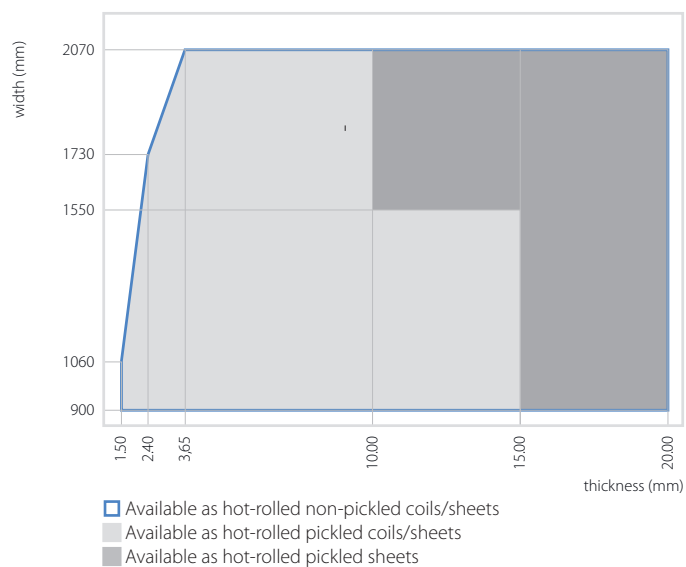
Certification

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.

Available dimensions of Ympress® Laser S355MC



Ympress® Laser range

Steel grades:	E250C, S355MC, S420MC
Thickness range: (sheets)	1.5 - 20mm (grade specific)
Width range:	900 - 2070mm
Surface treatment:	Hot rolled dry, pickled and oiled

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