

S700MC

S700MC offers a combination of strength and a high degree of formability coupled with excellent surface quality. The steel is readily weldable using all welding processes. Using high strength steels results in lighter equipment which translates into increased payloads and reduced fuel consumption. Thermomechanical rolling of these steels is indicated by the "M" while the "C" indicates that these steels are suitable for cold forming in compliance with EN 10149-1

Mechanical properties

Thickness (mm)	Yield strength MPa (min)	Tensile strength MPa	% El (min) A ₅	Impact strength (min) Deg C J	
3.0-10.0	700	750—930	15	-20	40

Chemical composition (%, ladle analysis)

C max	Si max	Mn max	P max	S max	Al min
0.12	0.2	2.0	0.02	0.01	0.015

Welding

Due to the thermomechanical treatment of these steels, CE values are low relative to their strength. These steels are readily weldable using all welding processes. Weldability has been improved by the selection of suitable alloying elements and by ladle treatment. Under normal conditions preheating is not necessary. Before welding ensure that the surfaces to be welded are clean and dry. The deposited weld metal should, in general, match the mechanical properties of the base plate. In certain circumstances, undermatching consumables may also be used provided that the weld is situated in a less stressed area of the fabrication.

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