



**PLATE S500MC | High Yield Strength**

**Description**

S500MC is a thermo-mechanically controlled, advanced high strength steel produced in accordance with EN 10149-2. This steel grade has very competitive characteristics such as good weldability, improved formability and toughness. These play a major role in improving payload due to lightweight design and improved total savings on fuel and weight in vehicular applications. The high strength of the MC grades is achieved by grain refinement and precipitation hardening of the ferritic microstructure. To ensure that the mechanical properties are met, the ferritic grain size is carefully controlled and is finer than ASTM E112, plate No 1, grain size 8.

**Product designation**

- S - Structural steel
- 500 - Minimum yield strength in MPa
- M - Thermo-mechanically rolled
- C - Suitable for cold forming

**Typical applications**

Load handling equipment, superstructures of commercial vehicles, frames and booms for forestry, crane arms and other lifting equipment, masts, frame structures for mobile vehicles.

**Chemical composition – Ladle analysis percentage max**

C	Mn	P	S	Si	Al	V	Ti	Nb
0.12	2.00	0.025	0.015	0.50	0.015	0.20	0.015	0.09

**Mechanical properties**

Minimum yield strength (MPa)	Tensile strength (MPa)	Minimum Elongation (%) <3mm Lo = 80mm	Minimum Elongation (%) A5 (%) Lo=5,56√So	Mandrel diameter for 180° bend test t = strip thickness
500	550 – 700	12	14	1.0t