



# HIGH-STRENGTH STEEL S500MC

S500MC is a high-strength steel produced at the facilities of Novolipetsk Steel in accordance with the requirements of EN 10149-2.

S500MC reduces metal consumption of the structure by up to 20% (depending on design solutions) and increases strength characteristics of the structure, as compared to ordinary grades.

### APPLICATIONS

- Transport engineering
- Lifting equipment
- Agricultural machinery



### ROLLED METAL IN SHEETS

Thickness, mm	4, 5, 6, 8
Width, mm	1,500
Length, m	3–12
Pack weight, t	5
Minimum batch	1 pack



## Technical Data

### TENSILE MECHANICAL PROPERTIES

Transverse specimen tests			
Grade	Yield strength, N/mm <sup>2</sup>	Ultimate strength, N/mm <sup>2</sup>	Elongation $\delta_s$ , %
S500MC	≥ 500	550–700	≥14%

### IMPACT ENERGY

Grade	Typical impact energy at a temperature of -40 °C, J	Typical impact strength, J/cm <sup>2</sup>
S500MC	63	140

The steel is subjected to bending tests up to an angle of 180° with a mandrel thickness equaling one sheet thickness. Specimens shall be taken across the rolling direction.

## Chemical Composition

Ladle analysis, %									
Grade	C	Mn	Si	P	S	Al	Nb	V	Ti
S500MC	≤0.12	≤1.70	≤0.50	≤0.025	≤0.015	≥0.015	≤0.09 <sup>3</sup>	≤0.20 <sup>3</sup>	≤0.15 <sup>3</sup>

<sup>3</sup> The sum of Nb, V and T shall be ≤ 0.22%

### AVAILABLE AT THE WAREHOUSE:

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[nlmk.shop](https://nlmk.shop)

