

High-strength steels

Hot rolled and pickled

The first stage in the production of flat carbon steels in the form of coils is hot rolling. Albasider is able to supply its customers with hot-rolled coils in thicknesses between 1.50 and 20 mm.

Following hot rolling, the material can undergo a pickling process.

Pickling is a chemical dissolution operation that takes place mainly through the use of special acids, which allows rust,

calamine and other processing residues to be removed from the surfaces.

Albasider can supply its customers with pickled plates, tapes and straps in thicknesses between 1.50 and 12 mm.

Hot Rolled			Pickled		
	Thickness	Width		Thickness	Width
Plates	1.50 - 20	≤ 2000	Plates	1.50 - 12	≤ 2000
Tapes	1.50 - 6	≤ 2000	Tapes	1.50 - 6	≤ 2000
Straps	-	-	Straps	1.50 - 3	180 - 2000
				4 - 6	500 - 2000

High-strength steels

Also called microalloyed steels, in addition to a low carbon content they have a high-purity internal molecular structure.

Given their low carbon content, they exhibit improved weldability.

The ductility, fatigue resistance and formability of these steels offer high performance at a low weight.

Main fields of application:

CONSTRUCTION
AND BUILDING

AGRICULTURAL
MACHINERY

CARPENTRY

PROFILES

AUTOMOTIVE
AND TRANSPORT

Mechanical properties

Thickness (mm)	EN 10149	S315MC	S355MC	S420MC	S460MC
1.50 - 2.99	Re (MPa)	≥ 315	≥ 355	≥ 420	≥ 460
	Rm (MPa)	390 - 510	430 - 550	480 - 620	520 - 670
	A 80 (%)	≥ 20	≥ 19	≥ 16	≥ 14
3 - 8	Re (MPa)	≥ 315	≥ 355	≥ 420	≥ 460
	Rm (MPa)	390 - 510	430 - 550	480 - 620	520 - 670
	A 5 (%)	≥ 24	≥ 23	≥ 19	≥ 17
8.01 - 12	Re (MPa)	≥ 315	≥ 355	≥ 420	≥ 460
	Rm (MPa)	390 - 510	430 - 550	480 - 620	520 - 670
	A 5 (%)	≥ 24	≥ 23	≥ 19	≥ 17

Thickness (mm)	S500MC	S550MC	S600MC	S650MC	S700MC
1.50 - 2.99	≥ 500	≥ 550	≥ 600	≥ 650	≥ 700
	550 - 700	600 - 760	650 - 820	700 - 880	750 - 950
	≥ 12	≥ 12	≥ 11	≥ 10	≥ 10
3 - 8	≥ 500	≥ 550	≥ 600	≥ 650	≥ 700
	550 - 700	600 - 760	650 - 820	700 - 880	750 - 950
	≥ 14	≥ 14	≥ 13	≥ 12	≥ 12
8.01 - 12	≥ 500	≥ 550	≥ 600	≥ 630	≥ 680
	550 - 700	600 - 760	650 - 820	700 - 880	750 - 950
	≥ 14	≥ 14	≥ 13	≥ 12	≥ 12

Legend

Re (MPa) = Yield strength (inelastic index); Rm (MPa) = Tensile strength;
A 80 (%) = Elongation for thickness < 3mm; A 5 (%) = Elongation for thickness ≥ 3mm

Please note:

Tests carried out transversely to the rolling direction.