

Structural 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

Structural steels

Structural steels are characterised by a special carbon-manganese alloy that ensures a minimum yield strength and a certain tensile strength. These also have a good aptitude for the welding process. The abbreviations JR, JO and J2 indicate the resilience level of the material:

- J2 indicates the minimum impact toughness characteristics of 27 J at T of -20 °C
- JO indicates minimum impact toughness characteristics of 27 J at T of 0 °C
- JR indicates the minimum impact toughness characteristics of 27 J at T of 20 °C
- The suffix "+N" after the desired reference grade indicates that these properties are ensured through an additional heating process called "normalising".

Main fields of application:

CONSTRUCTION AND BUILDING

MECHANICAL ENGINEERING

CARPENTRY

CONTAINERS

STEEL TANKS

PROFILES

Mechanical properties

Thickness (mm)	EN 10025	S235	S275	S355
1.35 - 1.50	Re (MPa)	≥ 235	≥ 275	≥ 355
	Rm (MPa)	360 - 510	430 - 580	510 - 680
	A 80 (%)	≥ 16	≥ 14	≥ 13
1.51 - 2	Re (MPa)	≥ 235	≥ 275	≥ 355
	Rm (MPa)	360 - 510	430 - 580	510 - 680
	A 80 (%)	≥ 17	≥ 15	≥ 14
2.01 - 2.50	Re (MPa)	≥ 235	≥ 275	≥ 355
	Rm (MPa)	360 - 510	430 - 580	510 - 680
	A 80 (%)	≥ 18	≥ 16	≥ 15
2.51 - 2.99	Re (MPa)	≥ 235	≥ 275	≥ 355
	Rm (MPa)	360 - 510	430 - 580	510 - 680
	A 80 (%)	≥ 19	≥ 17	≥ 16
3 - 15.99	Re (MPa)	≥ 235	≥ 275	≥ 355
	Rm (MPa)	360 - 510	410 - 560	470 - 630
	A 5 (%)	≥ 24	≥ 21	≥ 20
16 - 20	Re (MPa)	≥ 225	≥ 265	≥ 345
	Rm (MPa)	360 - 510	410 - 560	470 - 630
	A 5 (%)	≥ 24	≥ 21	≥ 20

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:

For material with width <600 mm transverse direction.
For material with width ≥600 mm longitudinal direction.