

Enamelling steels

Cold rolled

The cold-rolling process is a machining process without pre-heating the steel, which reduces the thickness of the rolled steel.

Albasider is able to supply its customers with plates, tapes and straps in thicknesses between 0.40 and 3 mm.

This processing generates steels with better mechanical strength and surface finish.

	Thickness	Width
Plates	0.40 - 3	≤ 2000
Tapes	0.40 - 3	≤ 2000
Straps	0.40 - 3	180 - 2000

Surface Finish		Surface treatment	
Finish	Appearance	S	Dry
A	Standard	O	Oiled
B	Enhanced		

Enamelling steels

Enamelling steels are produced by special processes that allow strict control of the chemical composition and microstructural characteristics. These characteristics give the material the ability to withstand the stresses induced by the enamelling process, reducing gaseous emissions during enamel firing and ensuring perfect adhesion:

- EK grades are suitable for conventional enamelling.
- ED grades are characterised by almost complete decarbonisation and are more suitable for direct enamelling.

As with deep-drawing steels, the higher the desired grade DC01 → DC06, the greater the material's propensity for deep drawing.

Main fields of application:

HOUSEHOLD APPLIANCES

INDUSTRY

ARCHITECTURAL APPLICATIONS

Mechanical properties

Thickness (mm)	EN 10209	DC01EK	DC04EK	DC05EK	DC06EK	DC03ED	DC04ED	DC06ED
0.40 - 0.50	Re (Mpa)	140 - 310	140 - 260	140 - 260	120 - 230	140 - 280	140 - 250	120 - 230
	Rm (Mpa)	270 - 390	270 - 350	270 - 350	270 - 350	270 - 370	270 - 350	270 - 350
	A 80 (%)	≥ 26	≥ 32	≥ 32	≥ 34	≥ 30	≥ 34	≥ 34
	r 90	-	-	-	-	-	-	-
0.51 - 0.70	Re (Mpa)	140 - 290	140 - 240	140 - 240	120 - 210	140 - 260	140 - 230	120 - 210
	Rm (Mpa)	270 - 390	270 - 350	270 - 350	270 - 350	270 - 370	270 - 350	270 - 350
	A 80 (%)	≥ 28	≥ 34	≥ 34	≥ 36	≥ 32	≥ 36	≥ 36
	r 90	-	-	≥ 1.50	≥ 1.60	-	-	≥ 1.60
0.71 - 2	Re (Mpa)	140 - 270	140 - 220	140 - 220	120 - 190	140 - 240	140 - 210	120 - 190
	Rm (Mpa)	270 - 390	270 - 350	270 - 350	270 - 350	270 - 370	270 - 350	270 - 350
	A 80 (%)	≥ 30	≥ 36	≥ 36	≥ 38	≥ 34	≥ 38	≥ 38
	r 90	-	-	≥ 1.50	≥ 1.60	-	-	≥ 1.60
2.01 - 3	Re (Mpa)	140 - 270	140 - 220	140 - 220	120 - 190	-	-	-
	Rm (Mpa)	270 - 390	270 - 350	270 - 350	270 - 350	-	-	-
	A 80 (%)	≥ 30	≥ 36	≥ 36	≥ 38	-	-	-
	r 90	-	-	≥ 1.30	≥ 1.40	-	-	-

Legend

Re (MPa) = Yield strength (inelastic index); **Rm (MPa)** = Tensile strength;
A 80 (%) = Elongation for thickness < 3 mm; **r 90** = anisotropy; **n 90** = work hardening.

Please note:

Tests carried out transversely to the rolling direction.