S700MC High-Strength Steel

OMEGA STEEL CO.
Istanbul · Dilovası plant

1.8974 · S700MC is the top standard grade of EN 10149-2: 700 MPa minimum yield, 750–950 MPa tensile, still ≤ 0.12 % carbon thanks to Mo and B micro-alloying, cold-formable to 1.5–2 × t and welded without preheat. Material number 1.8974, formerly QStE 690 TM; brand equivalents Strenx 700MC and Domex 700MC. It cuts 30–40 % of the weight out of booms, chassis and reinforcements. We supply coil and cut sheet 3–12 mm to order.

1.8974 | Yield ≥ 700 MPa | Bend 1.5–2 × t | 3–12 mm to order | No preheat, CEV ≈ 0.40

S700MC is the steel that made telescopic booms long and trailers light. Twice the yield of S355 in a strip that still bends on a press brake and welds with a MAG torch — provided the shop respects the radius, the heat input and the spring-back. We source it from EU and Turkish mills and cut it in Dilovası for crane, trailer and machinery builders across our export markets.

CHEMICAL COMPOSITION

Element	C	Si	Mn	P	S	Al	Nb	V	Ti	Mo	B
max. % (ladle)	0.12	0.60	2.10	0.025	0.015	≥ 0.015	0.09	0.20	0.22	0.50	0.005

Nb + V + Ti ≤ 0.22 %. CEV typically 0.38–0.42.

MECHANICAL PROPERTIES

Thickness	Yield ReH min (MPa)	Tensile Rm (MPa)	Elongation min	Impact KV
1.5–3 mm	700	750–950	10 (A80)	—
> 3 mm	700	750–950	14 % (A5)	40 J at −20 °C (long.)

EQUIVALENT GRADES

System	Grade	Note
SEW 092	QStE 690 TM	old German name
EN 10025-6	S690QL (QT plate)	same strength, plate, needs preheat
ASTM	A1011 HSLAS-F Gr. 80 / A656 Gr. 80	near, 550 MPa
SSAB	Strenx 700MC / Domex 700MC	brand
JIS	SPFH 780 (near)	

THICKNESS RANGE AND STOCK SIZES

Thickness	Widths × lengths	Availability
3–5 mm	coil 1 000–1 500 mm; sheet to 6 000	to order 3–5 weeks
6–8 mm	coil 1 250–1 500 mm; sheet 1 500 × 6 000	to order 3–5 weeks
10–12 mm	coil 1 500 mm; sheet 1 500 × 6 000	to order 4–5 weeks

STANDARDS

EN 10149-2:2013 — S700MC, 1.8974 · EN 10051 tolerances · EN 10204 3.1 · Former SEW 092 QStE 690 TM

Updated 22 September 2026 · figures are nominal; the mill certificate governs