S250GD Galvanized Steel

OMEGA STEEL CO.
Istanbul · Dilovası plant

1.0242 · S250GD is the structural galvanized grade we stock: guaranteed yield ≥ 250 MPa, tensile ≥ 330 MPa, elongation ≥ 19 % — the strip behind roofing sheet with a load table, light purlins, cable trays, framing and racking. Material number 1.0242. Coil, sheet and slit strip 0.40–3.0 mm with Z140 or Z275 from Dilovası; the grade most Turkish roll-formers run for standard trapezoidal and framing profiles.

1.0242 | Yield ≥ 250 MPa | Rm ≥ 330 MPa | 0.40–3.0 mm stock | Z140 · Z275

S250GD is the everyday structural galvanized coil: strong enough for a roof-sheet span table or a stud wall, soft enough for any roll-former, and on the floor at Dilovası in the widths a profile line needs. It is what our own trapezoidal and light-gauge lines run, and what we slit for customers who run their own.

CHEMICAL COMPOSITION

Element	C	Si	Mn	P	S
max. % (ladle)	0.20	0.60	1.70	0.10	0.045

Typical heat: C 0.06–0.09, Mn 0.35–0.60.

MECHANICAL PROPERTIES

Property	Requirement	Typical value	Note
Yield strength ReH / Rp0.2	≥ 250 MPa	280–330 MPa	fyb = 250
Tensile strength Rm	≥ 330 MPa	360–420 MPa	
Elongation A80	≥ 19 %	24–30 %	
Bend radius (180°)	0.5 × t	passes	

EQUIVALENT GRADES

System	Grade	Note
EN 10147 (old)	S250GD+Z (Fe E 250 G)	withdrawn
ASTM A653	SS Grade 37 (255 MPa)	Structural Steel
JIS G3302	SGC400	
GB/T 2518	S250GD+Z	
EN 10346	S280GD / S320GD	upward substitutes

COATING FOR PURLINS AND ROLL-FORMED FRAMING

Class	Zinc mass (g/m², both sides)	Thickness per side (µm)	Typical life C3	Where used
Z140	140	≈ 10	6–9 years	purlins inside a clad, heated building
Z200	200	≈ 14	9–13 years	general C and Z purlins, inland
Z275	275	≈ 20	12–18 years	the export default for purlins and rails
Z350	350	≈ 25	15–22 years	agricultural buildings, coastal sites

A purlin is cut, punched and often site-drilled, so the coating is broken at every hole and end. Zinc protects those edges sacrificially up to about 3 mm of exposed steel, which is why a heavier class buys more at the cut than the flat-sheet life table suggests. Touch-up paint on site is a cosmetic measure, not a substitute.

STANDARDS

EN 10346:2015 — S250GD+Z, 1.0242 · EN 10143 — tolerances · EN 1993-1-3 — cold-formed design (fyb = 250 MPa) · EN 10204 3.1

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