DX52D Galvanized Steel

OMEGA STEEL CO.
Istanbul · Dilovası plant

1.0350 · DX52D is the drawing grade of EN 10346 hot-dip galvanized steel: guaranteed yield window 140–300 MPa, tensile 270–420 MPa, elongation ≥ 26 %, lower carbon and tighter control than DX51D so that pressed panels, trays and shallow-drawn parts form without splitting or orange-peel. Material number 1.0350. Supplied as coil and sheet 0.40–3.0 mm with Z100–Z275 coating, to order from Turkish mills.

1.0350 | Yield 140–300 MPa | A80 ≥ 26 % | 0.40–3.0 mm to order | Z100–Z275

The moment a galvanized part is pressed rather than bent — a switchgear door with stiffening ribs, a water-heater jacket, a shallow tray — DX51D starts to crack at the corners and the press shop asks for DX52D. Same zinc, same thickness range, a cleaner and softer steel underneath. We order it against your tonnage with the coating and surface you specify.

CHEMICAL COMPOSITION

Element	C	Si	Mn	P	S	Ti
max. % (ladle)	0.12	0.50	0.60	0.10	0.045	0.30

Typical heat: C 0.03–0.05, Mn 0.20, Al-killed.

MECHANICAL PROPERTIES AND DRAWABILITY

Property	Requirement	Typical value	Note
Yield strength Rp0.2	140–300 MPa	180–240 MPa	guaranteed window
Tensile strength Rm	270–420 MPa	300–360 MPa	
Elongation A80	≥ 26 %	30–38 %	
Bend test	0 × t (180°)	passes	
r-value / n-value	not specified	r ≈ 1.2, n ≈ 0.18	shallow drawing

EQUIVALENT GRADES

System	Grade	Note
EN 10142 (old)	DX52D+Z (EN 10142)	withdrawn 2004
DIN 17162	St 03 Z+Z (EN 10142)	historic German
JIS G3302	SGCD1	
ASTM A653	FS Type B / Forming Steel	coating G90 ≈ Z275
GB/T 2518	DX52D+Z	

COATING MASS AGAINST FORMING SEVERITY

Class	Zinc mass (g/m², both sides)	Thickness per side (µm)	Typical life C3	Where used
Z100	100	≈ 7	4–6 years	the safest choice for pressed panels — least zinc to shed
Z140	140	≈ 10	6–9 years	standard for formed enclosure and appliance parts
Z200	200	≈ 14	9–13 years	formed outdoor parts, shallow-drawn covers
Z275	275	≈ 20	12–18 years	the practical ceiling for drawing; expect powdering at tight radii

Heavy classes are not offered on drawing grades: above roughly Z275 the brittle Fe–Zn alloy layer at the interface cracks and powders when the sheet is drawn rather than bent. If the part needs both a deep draw and a long outdoor life, draw it in Z100–Z140 and paint it, or move the corrosion duty to a post-galvanized assembly.

STANDARDS

EN 10346:2015 — DX52D+Z, 1.0350 · EN 10143 — tolerances · EN 10204 3.1 · Former EN 10142 / DIN 17162 St 03 Z

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