

1.0226 · DX51D is the base grade of EN 10346 hot-dip galvanized flat steel: a low-carbon bending quality (no guaranteed yield, tensile ≤ 500 MPa, elongation ≥ 22 %) delivered with a zinc coating of Z100 to Z275 g/m². Material number 1.0226. It is what "galvanized sheet" means in the trade — roofing, ducting, purlins, panels, appliance and enclosure parts — and the grade behind most of our galvanized stock: 0.30–4.0 mm, 1 000–1 500 mm wide, Z140 stocked, Z275 for export.

1.0226	Z100–Z275 (Z350 on order)	0.30–4.0 mm stock	Bending grade	Coil · sheet · slit strip
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Nine out of ten galvanized coils that leave Dilovası are DX51D. It bends, roll-forms, punches and welds without complaint, the zinc is the corrosion protection and the certificate says DX51D+Z140 or Z275. When a buyer in Lagos, Jeddah or Bucharest asks for "GI sheet", this is the grade we quote first.

CHEMICAL COMPOSITION

Element	C	Si	Mn	P	S	Ti
max. % (ladle)	0.18	0.50	1.20	0.12	0.045	0.30

Typical heat: C 0.04, Mn 0.25, Si 0.02 — much softer than the limits suggest.

MECHANICAL PROPERTIES AND BENDABILITY

Property	Requirement	Typical value	Note
Yield strength ReH / Rp0.2	not specified	280–320 MPa	bending grade
Tensile strength Rm	≤ 500 MPa	350–420 MPa	
Elongation A80	≥ 22 %	28–35 %	0.70 mm and up; 0.30–0.70 mm on agreement
Bend test	0 × t (180°)	passes	transverse, coating intact
Hardness	—	55–65 HRB	

EQUIVALENT GRADES

System	Grade	Note
EN 10142 (old)	DX51D+Z (EN 10142)	withdrawn 2004
DIN 17162	St 02 Z+Z (EN 10142)	historic German
JIS G3302	SGCC	
ASTM A653	CS Type B / Commercial Steel	coating G90 ≈ Z275
GB/T 2518	DX51D+Z	

ZINC COATING CLASSES — WHAT WE STOCK AND WHAT EACH IS BOUGHT FOR

Class	Zinc mass (g/m², both sides)	Thickness per side (µm)	Typical life C3	Where used
Z100	100	≈ 7	4–6 years	ducting, cable tray, parts that will be painted
Z140	140	≈ 10	6–9 years	the Dilovası stock class — general galvanized sheet
Z200	200	≈ 14	9–13 years	roofing and wall cladding inland
Z275	275	≈ 20	12–18 years	the export class: purlins, coastal roofing, silo panels
Z350	350	≈ 25	15–22 years	poultry houses, grain bins, humid interiors
Z450 / Z600	450 / 600	≈ 32 / 42	20–35 years	highway hardware, marine walkways, ground contact

Designations that follow the class on the certificate: spangle normal (N) or minimised (M); surface quality A (normal) or B (improved, for painting); treatment C (chemical passivation), O (oiled) or CO (both). Order B + C when the sheet will be powder-coated — passivation alone is not a paint primer.

STANDARDS

EN 10346:2015 — DX51D+Z, 1.0226 · EN 10143 — dimensions and tolerances of coated strip · EN 10204 3.1 · Former EN 10142 / DIN 17162 St 02 Z