DX54D Galvanized Steel

OMEGA STEEL CO.
Istanbul · Dilovası plant

1.0306 · DX54D is the extra-deep-drawing grade of EN 10346: an interstitial-free or ultra-low-carbon Al-killed substrate with yield 120–220 MPa, tensile 260–350 MPa, elongation ≥ 36 %, guaranteed r90 ≥ 1.6 and n90 ≥ 0.18 — the galvanized sheet of automotive body panels, deep cups and the most demanding housings. Material number 1.0306. Coil 0.50–2.0 mm with Z100–Z275, imported to order.

1.0306 | Yield 120–220 MPa | A80 ≥ 36 % | r90 ≥ 1.6 · n90 ≥ 0.18 | 0.50–2.0 mm to order

DX54D is the specialist: when a part is drawn deeper than its diameter, or the drawing says r ≥ 1.6, no other galvanized grade will do. It is an automotive-industry material produced on a few EU and Turkish lines, ordered by heat, and we handle it as a project item with the surface, coating and lubricant the press shop specifies.

CHEMICAL COMPOSITION

Element	C	Si	Mn	P	S	Ti
max. % (ladle)	0.06	0.50	0.35	0.06	0.025	0.30

Typical IF heat: C 0.002–0.005, Ti 0.05–0.08, Mn 0.10; Al-killed heats C 0.02.

MECHANICAL PROPERTIES AND DEEP-DRAWING INDICES

Property	Requirement	Typical value	Note
Yield strength Rp0.2	120–220 MPa	140–180 MPa	
Tensile strength Rm	260–350 MPa	280–320 MPa	
Elongation A80	≥ 36 %	38–45 %	
r90	≥ 1.6	1.8–2.2	guaranteed
n90	≥ 0.18	0.20–0.24	guaranteed
Ageing	non-ageing	indefinite (IF)	

EQUIVALENT GRADES

System	Grade	Note
EN 10142 (old)	DX54D+Z (EN 10142)	withdrawn 2004
DIN 17162	St 06 Z+Z (EN 10142)	historic German
JIS G3302	SGCD3	
ASTM A653	EDDS / Extra Deep Drawing Steel	coating G90 ≈ Z275
GB/T 2518	DX54D+Z	

WHY THE COATING IS THIN ON AN EXTRA-DEEP-DRAWING GRADE

Class	Zinc mass (g/m², both sides)	Thickness per side (µm)	Typical life C3	Where used
Z100	100	≈ 7	4–6 years	the normal choice — maximum drawability
Z140	140	≈ 10	6–9 years	supplied where the part also needs some outdoor life

DX54D is bought for the draw, not for the zinc, and the mills run it thin for that reason: every extra micrometre of the Fe–Zn alloy layer costs drawability. Specify skin-passed, minimised spangle, surface quality B and a non-ageing guarantee; for corrosion-critical drawn parts the usual answer is to draw in Z100 and coat the finished component.

STANDARDS

EN 10346:2015 — DX54D+Z, 1.0306 · EN 10143 — tolerances · EN 10204 3.1 · Former EN 10142 / DIN 17162 St 06 Z

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