Aluminium Trapezoidal Sheet

OMEGA STEEL CO.
Istanbul · Dilovası plant

Aluminium trapezoidal sheet is the corrosion-free version of the steel trapezoidal roof: the same 27/150, 38/151 and 45/333 profiles, rolled on our lines from EN AW-3105 or 3003 H44 alloy coil in 0.60–1.00 mm, at one-third of the weight of steel, never rusting at cut edges or screw holes, in mill-finish, stucco-embossed or coil-coated (PE / PVDF) surfaces. It is the roof and wall sheet for coastal and marine sites, chemical, fertiliser and food plants, salt and sulphur stores, swimming pools, cold stores, and any building where a 40-year maintenance-free skin matters more than the price per m². Rolled to length up to 12 m, with matching aluminium flashings, ridge caps and fixings, and shipped from Dilovası to the Gulf, North and West Africa, the Balkans and the Caucasus.

EN AW-3105 / 3003 H44 | 0.60–1.00 mm | 27/150 · 38/151 · 45/333 | ≈ 2.0–3.0 kg/m² | Mill · stucco · PE · PVDF

Steel trapezoidal sheet wins on price; aluminium wins on the cut edge — the place where a galvanized roof starts to rust. Where the air is salt, acid or ammonia, or the roof must weigh nothing, we roll the same profiles from aluminium coil on the same lines.

PROFILES, DIMENSIONS AND WEIGHT

Profile	Rib height	Rib pitch	Cover width	Thickness	kg/m² (0.70 mm)	Use
18/76 corrugated	18 mm	76 mm	1 000 mm	0.60–0.80 mm	≈ 2.2	sheds, fences, curved roofs — see the aluminium corrugated page
27/150	27 mm	150 mm	1 050 mm	0.60–0.80 mm	≈ 2.1	walls, canopies, light roofs, purlins ≤ 1.2 m
38/151	38 mm	151 mm	906 mm	0.70–1.00 mm	≈ 2.4	the standard roof profile, purlins 1.2–1.8 m
45/333	45 mm	333 mm	1 000 mm	0.70–1.00 mm	≈ 2.3	long-span roofs and walls, purlins 1.5–2.2 m
Fence / cladding 20/125	20 mm	125 mm	1 000 mm	0.60–0.70 mm	≈ 2.0	screening, fences, kiosks

Weight per m² covered = sheet weight × overlap factor; aluminium at 2.70 kg/dm³ (0.70 mm flat sheet = 1.89 kg/m²). Lengths to 12 m in one piece; sheets over 8 m are shipped flat-rack or on open trucks.

ALLOYS, TEMPERS AND SURFACE FINISHES

Alloy / temper	Rp0.2 (MPa)	Finish	Corrosion class	Choose for
EN AW-3105 H44	≥ 150	mill, stucco, PE / PVDF coated	C3–C4	the standard roofing coil — stocked
EN AW-3003 H44 / H46	≥ 145 / 165	mill, stucco, coated	C3–C4	roofing and cladding, good forming
EN AW-5754 H24	≥ 130	mill, stucco	C5-M (marine)	coastal, offshore, chemical and fertiliser plants
EN AW-1050 H24	≥ 85	mill, stucco	C4	light cladding, fences, insulation jacketing
Coil-coated PE 25 µm (EN 1396)	—	any RAL, gloss / matt	C3	coloured roofs and walls, 10–15-yr colour life
Coil-coated PVDF 25–35 µm	—	RAL and metallic	C4–C5	architectural façades, 20–25-yr colour warranty

Stucco embossing is applied to mill-finish coil before rolling; it stiffens thin sheet, hides scratches and diffuses glare. Coated coil is rolled with the protective film on.

SPAN, PURLIN SPACING AND LOAD

Profile / thickness	Single span	Multi span	Wall (wind 0.8 kN/m²)
27/150 — 0.70 mm	0.9 m	1.1 m	1.4 m
27/150 — 0.80 mm	1.0 m	1.2 m	1.6 m
38/151 — 0.70 mm	1.2 m	1.5 m	1.9 m
38/151 — 0.80 mm	1.4 m	1.7 m	2.1 m
38/151 — 1.00 mm	1.6 m	2.0 m	2.4 m
45/333 — 0.80 mm	1.5 m	1.9 m	2.3 m
45/333 — 1.00 mm	1.8 m	2.2 m	2.7 m

Aluminium's modulus is one-third of steel's: for the same profile and thickness the purlin spacing is about 25–35 % closer than for steel sheet. Values are indicative; the project engineer designs to EN 1999-1-4 with the site's snow and wind loads.

ALUMINIUM VS GALVANIZED VS PPGI VS ALUZINC TRAPEZOIDAL

	Aluminium 3105 H44	Galvanized Z275	PPGI PE 25 µm	Aluzinc AZ150
Weight	≈ 2.4 kg/m²	≈ 4.5 kg/m²	≈ 4.6 kg/m²	≈ 4.4 kg/m²
Life in C5 marine	40+ years	5–10 years	10–15 years	15–20 years
Cut-edge corrosion	none	white / red rust	red rust under paint	slow

	Aluminium 3105 H44	Galvanized Z275	PPGI PE 25 µm	Aluzinc AZ150
Purlin spacing (38/151)	1.2–1.6 m	1.8–2.2 m	1.8–2.2 m	1.8–2.2 m
Thermal expansion	24 µm/m·°C	12	12	12
Solar reflectance	80–90 % (mill)	60 %	by colour	70 %
Fire	softens 250 °C, melts 660 °C	A1	A1 (paint limited)	A1
Price per m² (index)	2.0–3.0	1.0	1.2	1.3
Choose for	coastal, chemical, weight-critical, 40-yr life	dry inland, budget	coloured roofs inland	coastal on a budget

Aluzinc and galvanized steel are on the [trapezoidal hub](/products/roofing/trapezoidal-corrugated-sheet/); the steel profiles have their own pages for [27/150](/products/roofing/trapezoidal-sheet-27-150/), [38/151](/products/roofing/trapezoidal-sheet-38-151/) and [45/333](/products/roofing/trapezoidal-sheet-45-333/).

STANDARDS

EN 485 — wrought aluminium sheet, strip and plate (mechanical properties) · EN 573-3 — chemical composition (EN AW-3105, 3003, 5754) · EN 1396 — coil-coated aluminium sheet and strip · EN 14782 — self-supporting metal sheet for roofing (CE marking) · EN 1999-1-4 (Eurocode 9) — cold-formed aluminium structural sheeting · EN 10204 3.1 — inspection certificates