Trapezoidal Sheet 45/333

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Istanbul · Dilovası plant

The 45/333 is the long-span trapezoidal: three deep 45 mm ribs on a 333 mm pitch across a 1 000 mm cover, rolled from S280GD / S320GD galvanized or pre-painted coil in 0.50–1.0 mm. It spans 3–4 m between purlins, which lets a building designer drop every other purlin, and in 0.75–1.0 mm it serves as a light structural deck for platforms and as the outer sheet of built-up roofs with wide-spaced purlins. We roll it at Dilovası in lengths to 14 m with matching flashings and closures.

45 mm rib · 333 mm pitch | Cover 1 000 mm | 0.50–1.0 mm | Purlins 3–4 m | Light deck option

Fewer purlins is cheaper steel: with 45/333 at 3.5 m spacing a roof needs a third fewer purlins than with T38. Long-span sheds, hangars and re-roofing jobs over old timber trusses are where this profile earns its place.

GRADES, STANDARDS AND TOLERANCES

Grade / standard	Yield (MPa)	Note
S280GD+Z275 (EN 10346)	280	the standard for 45/333
S320GD+Z275	320	longest spans, deck use
S350GD+Z275	350	to order, 1.0 mm deck
DX51D+Z140	≈ 140 (not guaranteed)	walls only, 0.50 mm
PPGI on S280GD	280	coloured long-span roofs

Load-span data are calculated for S280GD minimum; deck spans at 1.0 mm for S320GD.

PROFILE DIMENSIONS AND SPAN TABLE

Item	0.50 mm	0.60 mm	0.70 mm	0.80 mm	1.0 mm
Rib height / pitch	45 / 333 mm	same	same	same	same
Ribs · cover · overall	3 · 1 000 · 1 060 mm	same	same	same	same
Weight per m² covered	4.8 kg	5.7 kg	6.7 kg	7.6 kg	9.5 kg
Purlin spacing, 0.75 kN/m²	2.6 m	3.0 m	3.4 m	3.7 m	4.2 m
Purlin spacing, 1.0 kN/m²	2.3 m	2.7 m	3.0 m	3.3 m	3.8 m
Purlin spacing, 1.5 kN/m²	1.9 m	2.2 m	2.5 m	2.8 m	3.2 m
Purlin spacing, 2.5 kN/m² (deck)	—	—	1.9 m	2.1 m	2.5 m
Wall girt spacing, 0.6 kN/m²	2.8 m	3.2 m	3.6 m	4.0 m	4.5 m
Min. roof slope	5 %	5 %	5 %	5 %	5 %
Max. length	14 m	14 m	14 m	14 m	14 m

Roof values: total load on slope, two-span continuous; deck values: uniformly distributed load with L/200. Wind uplift and fixing pull-out must be checked at these spans; CE load tables per project on request.

MATERIAL, THICKNESS AND WEIGHT

Material	Thickness (TCT)	kg/m² covered	Colours	Life (C3 / coastal)	Note
Galvanized DX51D+Z100	0.40–0.50	3.6–4.5	spangle silver	10–15 / 5–8 yr	cheapest; warehouses, sheds
Galvanized Z140–Z275	0.50–0.70	4.5–6.3	silver	15–25 / 8–12 yr	exposed roofs, agriculture
PPGI PE 25 µm on Z100	0.40–0.60	3.7–5.5	RAL 9002, 9010, 3009, 7016, 6005 …	10–15 / 5–8 yr	the standard coloured roof
PPGI SMP / HDP	0.50–0.60	4.6–5.5	as above	15–25 / 10–15 yr	warranty projects
PPGI PVDF	0.50–0.70	4.6–6.4	as above	25–30 / 15–20 yr	façades, Gulf coast
Aluzinc AZ150	0.45–0.60	4.0–5.4	matt silver	25–30 / 12–15 yr	to order, 10 t

45/333 is normally S280GD Z275 galvanized 0.60–0.70 mm; PPGI in 9002 and 7016 for coloured long-span roofs.

STANDARDS

EN 14782 — self-supporting metal sheet for roofing and cladding · EN 10346 — DX51D / S280GD + Z100–Z275 substrate · EN 10169 — coil-coated (PPGI) substrate · EN 1993-1-3 — cold-formed design; EN 10204 3.1