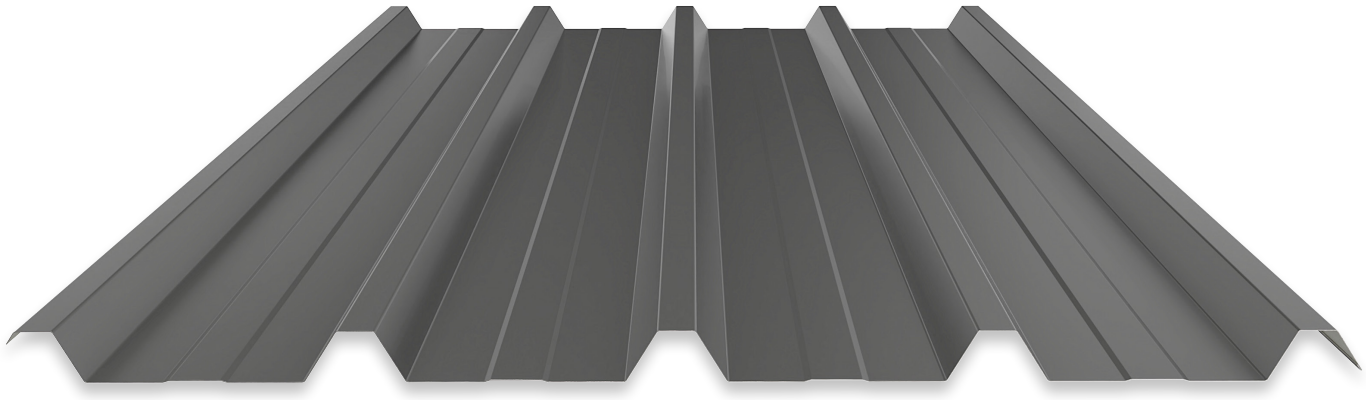
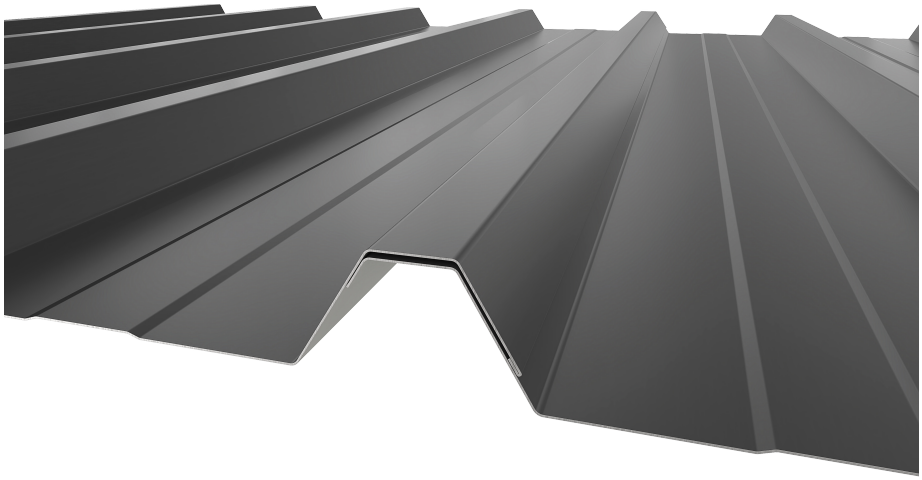
361metal

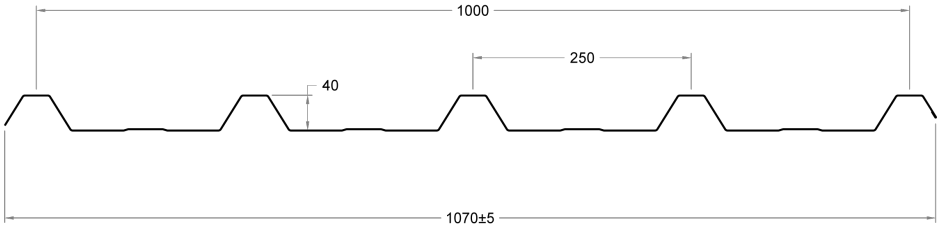
A40.1000

TRAPEZOIDAL PROFILE
FOR ROOFING, DECKING AND FAÇADES





Geometric Characteristics



Designation

A40.1000 Trapezoidal Sheet

Description

Cold-formed galvanised and pre-painted steel sheet.

Application

Roof, façade and deck cladding for buildings.

Dimensions

Effective width: 1000 mm
Overall width: 1070 mm
Thicknesses (mm): 0.5 to 1.2 mm
Lengths: 2000 to 14000 mm

TECHNICAL DATA SHEET A40.1000

Composition

Substrate
Structural steel S220GD to S320GD.

Metallic Coating
Galvanised coating Z100 to Z275, or equivalent in AZ or ZM.

Organic Coating
Polyester coating 25 µm, or others such as PVDF, HDX or HPS.

Regulations

Steel sheet certifications
CE marking in accordance with EN 10346 for metallic coatings and EN 10169 for organic coatings.

A40.1000 profile certification
CE marking in accordance with EN 14782.

Reaction to Fire

Reaction to fire classification A1 in accordance with EN 13501 (Euroclasses).

Profile technical data

			Upper Flange in Compression		Lower Flange in Compression			
Thickness (mm)	Weight (kg/m)	Weight (kg/m^2)	Moment Resistance (kNm/m)	Moment of Inertia (cm^4/m)	Moment Resistance (kNm/m)	Moment of Inertia (cm^4/m)	Web Crippling (kN/m)	Shear Resistance (kN/m)
0.50	3.925	3.925	0.78	10.76	0.81	9.41	4.10	17.48
0.60	4.906	4.906	1.02	13.86	1.00	12.02	5.96	25.98
0.70	5.888	5.888	1.21	16.48	1.19	14.71	8.12	32.33
0.80	6.869	6.869	1.41	19.14	1.38	17.47	10.59	37.32
1.00	7.850	7.850	1.80	24.42	1.77	23.11	16.43	47.38
1.20	9.813	9.813	2.17	29.52	2.15	28.70	23.44	57.53

Allowable load table

Maximum uniformly distributed load P (kN/m²) for a deflection f ≤ L/200.
The table data are based on calculations performed for S220GD and S320GD steel in accordance with EN 10346.

SLS - Deflection limit:
L/200

D - Downward loads
A - Upward loads

Loads governed by
ULS **SLS**

S220GD - 2 Supports

Thickness (mm)		Span length (m)															
		1.00	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**	**1.70**	**1.80**	**1.90**	**2.00**	**2.10**	**2.20**	**2.30**	**2.40**	**2.50**
0.50	**D**	2.70	2.45	2.24	2.07	1.92	1.79	1.58	1.39	1.24	1.11	1.00	0.90	0.77	0.67	0.59	0.51
	A	4.36	3.61	3.04	2.60	2.24	1.96	1.73	1.53	1.34	1.15	0.99	0.86	0.75	0.67	0.59	0.53
0.60	**D**	3.93	3.56	3.26	3.01	2.73	2.37	2.08	1.84	1.63	1.46	1.32	1.16	1.00	0.87	0.76	0.66
	A	5.38	4.46	3.75	3.20	2.77	2.42	2.13	1.89	1.69	1.46	1.26	1.10	0.96	0.85	0.75	0.67
0.70	**D**	5.36	4.87	4.44	3.78	3.25	2.82	2.48	2.19	1.94	1.74	1.57	1.38	1.19	1.03	0.90	0.79
	A	6.41	5.31	4.47	3.81	3.30	2.88	2.54	2.25	2.02	1.79	1.54	1.34	1.17	1.03	0.92	0.82
0.80	**D**	7.00	6.15	5.16	4.39	3.77	3.28	2.88	2.54	2.26	2.02	1.82	1.60	1.38	1.20	1.05	0.92
	A	7.44	6.16	5.19	4.43	3.83	3.34	2.94	2.61	2.34	2.11	1.83	1.59	1.39	1.23	1.09	0.97
1.00	**D**	9.53	7.86	6.60	5.61	4.83	4.20	3.68	3.26	2.90	2.59	2.34	2.04	1.76	1.53	1.34	1.17
	A	9.48	7.85	6.60	5.64	4.87	4.25	3.74	3.32	2.97	2.67	2.42	2.20	2.01	1.84	1.70	1.57
1.20	**D**	11.49	9.48	7.96	6.77	5.83	5.07	4.45	3.93	3.50	3.14	2.83	2.47	2.13	1.85	1.62	1.42
	A	11.51	9.52	8.01	6.84	5.90	5.15	4.53	4.02	3.59	3.23	2.92	2.66	2.43	2.23	2.05	1.89

S220GD - 3 Supports

Thickness (mm)		Span length (m)															
		1.00	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**	**1.70**	**1.80**	**1.90**	**2.00**	**2.10**	**2.20**	**2.30**	**2.40**	**2.50**
0.50	**D**	1.78	1.56	1.38	1.23	1.11	1.00	0.91	0.83	0.76	0.70	0.64	0.59	0.55	0.51	0.48	0.45
	A	4.18	3.46	2.91	2.49	2.15	1.88	1.65	1.47	1.32	1.18	1.07	0.98	0.89	0.82	0.76	0.70
0.60	**D**	2.44	2.14	1.89	1.68	1.50	1.35	1.23	1.12	1.02	0.94	0.86	0.79	0.74	0.68	0.64	0.59
	A	5.49	4.54	3.82	3.27	2.82	2.46	2.17	1.93	1.73	1.55	1.41	1.28	1.17	1.07	0.99	0.92
0.70	**D**	3.17	2.76	2.43	2.15	1.93	1.73	1.57	1.42	1.30	1.19	1.09	1.01	0.93	0.86	0.80	0.75
	A	6.53	5.41	4.55	3.89	3.36	2.93	2.58	2.29	2.05	1.85	1.67	1.52	1.39	1.28	1.18	1.09
0.80	**D**	3.94	3.42	3.01	2.66	2.37	2.13	1.92	1.74	1.59	1.45	1.33	1.23	1.13	1.05	0.98	0.91
	A	7.58	6.28	5.28	4.51	3.90	3.40	3.00	2.66	2.38	2.14	1.94	1.77	1.62	1.48	1.37	1.26
1.00	**D**	8.50	7.71	6.46	5.50	4.73	4.11	3.60	3.18	2.83	2.53	2.28	2.06	1.87	1.70	1.56	1.43
	A	9.67	8.00	6.74	5.75	4.97	4.34	3.82	3.40	3.04	2.73	2.48	2.25	2.06	1.89	1.74	1.61
1.20	**D**	7.39	8.27	7.11	6.18	5.42	4.79	4.27	3.82	3.44	3.09	2.78	2.52	2.29	2.09	1.91	1.75
	A	11.63	9.62	8.10	6.91	5.97	5.21	4.59	4.07	3.64	3.28	2.97	2.70	2.46	2.26	2.08	1.93

S220GD - 4 Supports

Thick-ness (mm)		Span length (m)															
		1.00	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**	**1.70**	**1.80**	**1.90**	**2.00**	**2.10**	**2.20**	**2.30**	**2.40**	**2.50**
0.50	**D**	2.09	1.84	1.63	1.46	1.31	1.19	1.08	0.99	0.91	0.84	0.77	0.72	0.66	0.62	0.58	0.54
	A	5.21	4.31	3.63	3.10	2.68	2.34	2.06	1.83	1.63	1.47	1.33	1.21	1.11	1.02	0.94	0.87
0.60	**D**	2.88	2.53	2.23	1.99	1.79	1.62	1.47	1.34	1.22	1.13	1.04	0.96	0.89	0.83	0.77	0.72
	A	6.85	5.67	4.77	4.07	3.52	3.07	2.70	2.40	2.15	1.93	1.75	1.59	1.45	1.33	1.23	1.13
0.70	**D**	3.75	3.27	2.89	2.57	2.30	2.07	1.88	1.71	1.56	1.43	1.32	1.22	1.13	1.05	0.98	0.91
	A	8.15	6.74	5.67	4.84	4.18	3.65	3.22	2.85	2.55	2.30	2.08	1.89	1.73	1.58	1.46	1.35
0.80	**D**	4.67	4.07	3.58	3.18	2.84	2.56	2.31	2.10	1.92	1.76	1.62	1.49	1.38	1.28	1.19	1.11
	A	9.46	7.83	6.59	5.62	4.86	4.24	3.73	3.31	2.96	2.67	2.41	2.19	2.00	1.84	1.69	1.57
1.00	**D**	6.67	5.78	5.07	4.48	3.99	3.58	3.23	2.93	2.66	2.44	2.23	2.06	1.90	1.76	1.63	1.52
	A	12.07	9.99	8.40	7.17	6.19	5.41	4.76	4.23	3.78	3.40	3.07	2.80	2.55	2.34	2.16	2.00
1.20	**D**	8.83	7.64	6.67	5.88	5.23	4.68	4.21	3.81	3.46	3.16	2.90	2.66	2.46	2.27	2.11	1.96
	A	14.52	12.01	10.10	8.62	7.44	6.50	5.72	5.07	4.53	4.08	3.69	3.35	3.06	2.81	2.58	2.39

S320GD - 2 Supports

Thick-ness (mm)		Span length (m)															
		1.00	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**	**1.70**	**1.80**	**1.90**	**2.00**	**2.10**	**2.20**	**2.30**	**2.40**	**2.50**
0.50	**D**	3.26	2.96	2.71	2.50	2.32	2.16	1.97	1.63	1.37	1.16	0.99	0.85	0.73	0.63	0.55	0.49
	A	6.23	5.16	4.24	3.34	2.68	2.19	1.81	1.52	1.28	1.10	0.95	0.82	0.72	0.64	0.57	0.51
0.60	**D**	4.74	4.31	3.95	3.64	3.38	3.09	2.54	2.11	1.77	1.49	1.27	1.09	0.94	0.82	0.72	0.63
	A	7.70	6.37	5.36	4.57	3.95	3.45	2.98	2.49	2.11	1.80	1.55	1.35	1.18	1.04	0.92	0.82
0.70	**D**	6.48	5.88	5.39	4.97	4.61	3.83	3.14	2.61	2.19	1.85	1.58	1.36	1.17	1.02	0.89	0.78
	A	9.17	7.59	6.39	5.23	4.20	3.43	2.83	2.37	2.01	1.72	1.48	1.29	1.13	0.99	0.88	0.79
0.80	**D**	8.46	7.68	7.04	6.32	5.44	4.46	3.66	3.04	2.55	2.16	1.84	1.58	1.37	1.19	1.04	0.91
	A	10.65	8.81	7.42	6.22	5.00	4.07	3.37	2.82	2.39	2.04	1.76	1.53	1.34	1.18	1.05	0.93
1.00	**D**	13.76	11.36	9.53	8.11	6.99	5.71	4.69	3.89	3.27	2.76	2.36	2.02	1.75	1.52	1.33	1.16
	A	13.61	11.26	9.47	8.08	6.97	6.08	5.35	4.75	4.24	3.81	3.45	3.13	2.86	2.62	2.41	2.23
1.20	**D**	16.74	13.82	11.61	9.88	8.51	6.95	5.71	4.74	3.98	3.37	2.87	2.47	2.13	1.85	1.62	1.42
	A	16.57	13.70	11.52	9.83	8.48	7.40	6.51	5.77	5.16	4.63	4.19	3.80	3.47	3.18	2.93	2.70

S320GD - 3 Supports

Thickness (mm)		Span length (m)															
		1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40	2.50
0.50	D	2.28	2.00	1.78	1.60	1.44	1.30	1.19	1.09	1.00	0.92	0.85	0.79	0.74	0.69	0.64	0.60
	A	5.64	4.67	3.93	3.35	2.89	2.53	2.22	1.97	1.77	1.59	1.44	1.31	1.19	1.10	1.01	0.93
0.60	D	3.15	2.76	2.45	2.19	1.97	1.78	1.62	1.48	1.35	1.25	1.15	1.07	0.99	0.92	0.86	0.81
	A	7.39	6.12	5.15	4.39	3.79	3.31	2.92	2.59	2.31	2.08	1.88	1.71	1.56	1.43	1.32	1.22
0.70	D	4.10	3.59	3.17	2.83	2.53	2.29	2.08	1.89	1.73	1.59	1.47	1.36	1.26	1.17	1.09	1.02
	A	9.32	7.71	6.49	5.54	4.78	4.17	3.67	3.26	2.91	2.62	2.37	2.15	1.97	1.81	1.66	1.54
0.80	D	5.12	4.47	3.94	3.51	3.14	2.83	2.56	2.33	2.13	1.96	1.80	1.66	1.54	1.43	1.33	1.24
	A	10.85	8.98	7.56	6.45	5.57	4.86	4.28	3.80	3.39	3.05	2.76	2.51	2.29	2.10	1.94	1.79
1.00	D	12.30	11.12	9.33	7.94	6.83	5.94	5.21	4.61	4.10	3.68	3.31	2.99	2.72	2.48	2.27	2.09
	A	13.90	11.50	9.67	8.25	7.13	6.22	5.48	4.86	4.34	3.91	3.53	3.21	2.93	2.69	2.48	2.29
1.20	D	9.77	11.31	9.76	8.51	7.49	6.64	5.93	5.32	4.80	4.36	3.97	3.63	3.33	3.04	2.79	2.56
	A	16.88	13.96	11.75	10.02	8.65	7.55	6.64	5.89	5.26	4.73	4.28	3.89	3.55	3.25	2.99	2.77

S320GD - 4 Supports

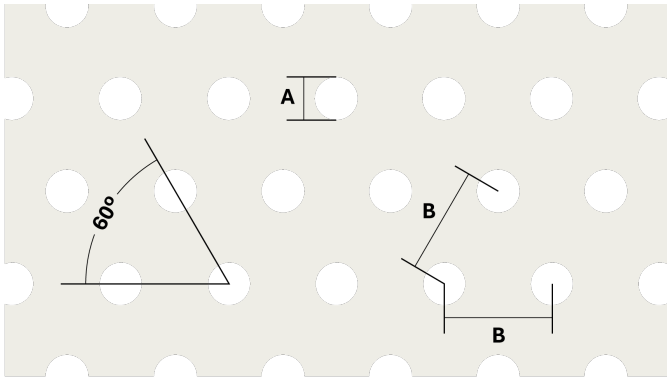
Thickness (mm)		Span length (m)															
		1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40	2.50
0.50	D	2.66	2.35	2.09	1.88	1.70	1.54	1.41	1.29	1.19	1.10	1.02	0.95	0.88	0.82	0.77	0.72
	A	7.04	5.82	4.90	4.18	3.61	3.15	2.77	2.46	2.20	1.98	1.79	1.62	1.48	1.34	1.19	1.06
0.60	D	3.69	3.25	2.89	2.58	2.33	2.11	1.92	1.76	1.62	1.49	1.38	1.28	1.19	1.11	1.04	0.97
	A	9.23	7.63	6.42	5.48	4.73	4.13	3.63	3.22	2.88	2.59	2.34	2.13	1.94	1.73	1.53	1.36
0.70	D	4.83	4.24	3.75	3.35	3.01	2.72	2.48	2.26	2.07	1.91	1.76	1.63	1.52	1.41	1.32	1.24
	A	11.64	9.63	8.10	6.91	5.96	5.20	4.58	4.06	3.63	3.26	2.95	2.68	2.43	2.14	1.89	1.68
0.80	D	6.05	5.29	4.68	4.17	3.74	3.38	3.06	2.79	2.56	2.35	2.17	2.01	1.86	1.73	1.62	1.51
	A	13.55	11.21	9.43	8.04	6.95	6.06	5.33	4.73	4.23	3.80	3.43	3.12	2.83	2.49	2.20	1.95
1.00	D	8.71	7.59	6.68	5.93	5.30	4.77	4.32	3.93	3.59	3.29	3.03	2.79	2.59	2.40	2.24	2.09
	A	17.35	14.35	12.07	10.30	8.89	7.75	6.82	6.05	5.41	4.86	4.40	3.99	3.62	3.18	2.81	2.50
1.20	D	11.62	10.10	8.86	7.84	6.99	6.28	5.67	5.15	4.69	4.29	3.95	3.64	3.17	2.76	2.42	2.13
	A	21.08	17.43	14.66	12.50	10.79	9.41	8.28	7.34	6.56	5.90	5.33	4.84	4.42	4.05	3.72	3.44

Perforated sheet option

361 Metal can supply this profile with uniform perforation in two patterns:

Type R3/T5 — 3 mm diameter holes at 5 mm centres, in a 60º triangular pattern, giving an open area of approximately 33%.
Type R5/T8 — 5 mm diameter holes at 8 mm centres, in a 60º triangular pattern, giving an open area of approximately 35%.

Other perforation patterns available on request.



Legend

Pattern	Hole diameter **(A)**	Distance between centres **(B)**
R3/T5	3 mm	5 mm
R5/T8	5 mm	8 mm

Selection of Available Coatings

To support the choice of coating and ensure maximum product durability, we offer a range of coatings selectable according to the installation environment.

Available coatings

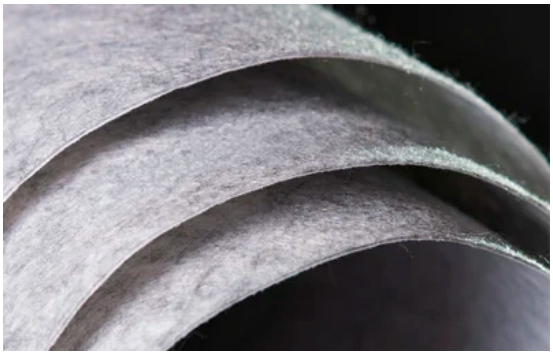
Coatings	Exterior Environment							Interior Environment			
	Clean Rural	Urban/ Industrial	Marine			Resistance		Low Humidity	Medium Humidity	High Humidity	Interior Corrosion
			3 - 20 km	1 - 3 km	0 - 1 km	Corrosion	UV				
PE 25µm	✓	*	*	×	×	*	*	✓	✓	Ai3	CPI3
PE 35µm HDS 35µm	✓	✓	✓	*	×	RC4	RUV4	✓	✓	Ai3	CPI4
PVDF 35µm	✓	✓	✓	*	×	RC4	RUV4	✓	✓	Ai3	CPI4
PUPA 55µm HDX 55µm	✓	✓	✓	✓	*	RC5	RUV4	✓	✓	Ai3	CPI4
HPS 200µm	✓	✓	✓	✓	✓	RC5+	RUV4	✓	✓	Ai5	CPI5

✓ Suitable Coating **× Unsuitable Coating** *** Upon Enquiry**

Indicative table only. Each construction site and project has its own specific requirements, so we recommend contacting our team directly for a tailored assessment.

Condensation Control

The A40 is available with an optional factory-applied anti-condensation interior coating. The material retains condensed moisture instead of letting it drip. As the air warms up, the accumulated water gradually returns to the atmosphere by evaporation. It is a durable material, withstands fresh water jet washing and maintains its performance in aggressive environments.



Non-combustible.
Rain noise reduction up to 6 dB.
Water absorption capacity up to 1.5 kg/m^2.

Quality and Safety

Steel and coatings free of SVHC, in compliance with the European REACH regulation.

Information subject to change without prior notice. Check the latest version at www.361metal.com. Informative data only; technical validation is required for each application.