

Sheets



Everlast, a Hindalco brand launched in December 2002, is made of aluminium and is ideal for all roofing and cladding needs. It is easy to use, durable and economical to work with. Using aluminium for roofing has many benefits. Among these are the following:

- Aluminium roofing sheets are extremely light and have a high strength-to-weight ratio.
- Aluminium is an increasingly popular choice for use in installations and buildings. It is corrosion-resistant in almost any kind of environment. Even in highly corrosive industrial environments, it is resistant to fumes and vapours of organic compounds and to chemicals like ammonia, carbon dioxide and acids such as hydrochloric acid, nitric acid and sulphuric acid. Such corrosion resistance gives the metal a long life and keeps it looking good throughout its life.
- The shine and brightness of aluminium livens its surroundings, and, because it doesn't stain, discolour or rot, it keeps its brightness and shine for a long time. Aluminium corrugated sheets can take a variety of finishes, colours and textures, which protect them and further enhance their appearance.
- An aluminium structure can be easily dismantled, transported and re-assembled in a new location.
- Though the metal is a good conductor of heat, its high reflectivity for radiant heat and light (75 to 80 per cent when new, 60 per cent after several years) keeps the interiors of aluminium building from five to eight degrees celsius cooler in summer, while its low emission rate cuts heat loss in winter.
- It is easy to maintain and wash.

Physical properties

Alloy (AA)	Temper	UTS (mpa)		Yield stress (0.2% proof stress)	Elongation %
		Min	Max		
3003	H18	170	-	165	1
3105	H18	190	-	165	1
8011	H18	175	-	165	2

Chemical composition (%)

Alloy (AA)	Al	Cu	Mg	Si	Fe	Mn	Zn	Ti	Cr	Remarks
8011	Remainder	0.20	0.10	0.60 — 0.95	0.60 — 0.95	0.10	0.20	0.20	0.20	-
3003	Remainder	0.10	0.10	0.60	0.70	0.80 — 1.20	0.20	0.20	-	-
3105	Remainder	0.30	0.20 — 0.80	0.60	0.70	0.2 — 0.8	0.40	0.10	0.20	-
5052	Remainder	0.10	1.70 — 2.60	0.60	0.70	0.50	0.20	-	0.25	Cr+Mn=0.50

Other typical properties

Thickness

Circular corrugated sheet	0.30 — 1.22 mm
Industrial troughed sheets	0.40 — 1.63mm
Curvomatic troughed sheets	0.40 — 1.22mm

Width

Hindalco's aluminium sheets are available in the following widths (unit mm):

Troughed	Overall	Effective
Ind. 6	795	750
Ind. 7	920	875
Ind. 8	1044	1000
Circular corrugated	Overall	Effective
10/3	800	750
16/3	1250	1200
12/3	950	900

Length

Between 1500 to 6500 mm. Other lengths may be provided on request.

Young's Modulus

Young's Modulus or modulus of elasticity for aluminium is 7.0×10^4 mpa.

Finish

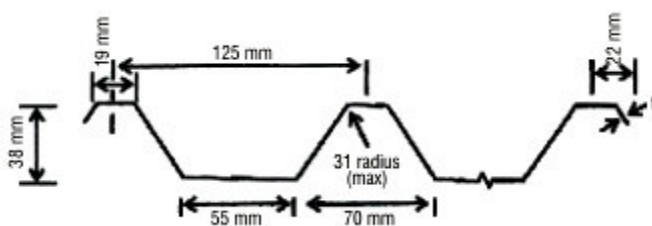
Everlast is available in mill and stucco finish. Colour coated sheets can be provided on request.

Curvomatic and tiled profile sheets are offered.

Workability

Everlast can be bent to the required shape. It is subject to the bend radii of the alloy.

Troughed sheets



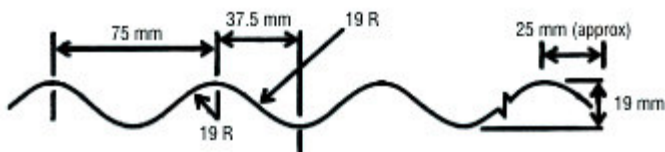
Thickness (mm)	Kg/Sq.m.	Kg/m			Section modulus (Z) per pitch mm ³	Moment of inertia (I) per pitch mm ⁴
		Ind-6 (795mm)	Ind-7 (920mm)	Ind-8 (1044mm)		
1.20	4.33	3.43	3.97	4.50	1739	41383

0.90	3.23	2.56	2.96	3.36	1310	31099
0.70	2.50	2.00	2.31	2.62	1037	24379
0.65	2.31	1.83	2.12	2.41	952	22346
0.55	1.96	1.57	1.82	2.07	823	19296

Permissible loading

Purlin spacing L(mm)		1.22mm	0.91mm	0.71mm	0.56mm
914		1066	507	636	505
		1245	943	743	590
1219		600	454	357	284
		700	530	418	332
1524		384	290	229	182
		448	339	267	212
1829		266	202	159	126
		311	236	186	148
2134		181	136	106	84
		229	173	136	108






Circular corrugated sheets



Thickness (mm)	Kg/Sq.m.	Kg/mtr			Section Modulus (Z) per pitch mm ¹	Moment of Inertia (I) per pitch mm ⁴
		10/75 (1250 mm)	18/75 (950 mm)	10/75 (800 mm)		

1.20	3.72	4.71	3.66	3.01	462	4670
0.90	2.77	3.51	2.68	2.25	348	3466
0.70	2.14	2.74	2.09	1.75	274	2697
0.65	1.98	1.59	1.89	2.49	251	2469
0.55	1.68	2.16	1.65	1.38	217	2123
0.45	1.38	1.10	1.31	1.72	175	1704
0.35	1.07	0.85	1.02	1.34	137	1321

Permissible loading

Purlin spacing L(mm)		1.22mm	0.91mm	0.71mm	0.56mm
914		432	321	250	197
		551	416	327	259
1219		182	135	105	83
		310	234	180	146
1524		93	69	54	43
		197	150	118	93
1829		54	40	31	25
		129	96	74	59
2134		34	25	20	16
		81	60	47	37