

unidek

steel roof & cladding

unidek is a modern ribbed profile which has **high strength**, light weight and long spanning capabilities. It is manufactured via continuous processes of cold forming High-Tensile Zinalume® steel or Clean Colorbond® steel therefore can be supplied in any length limited only by transportation and handling.

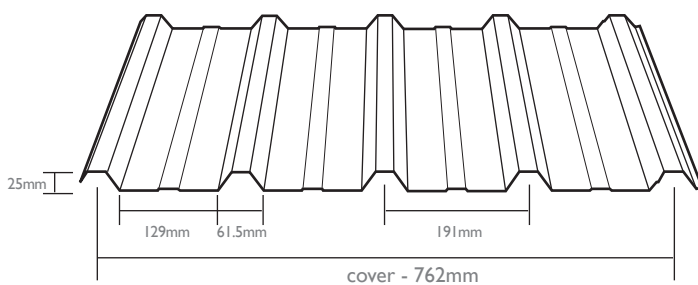
Profile

- ▶ unidek is designed to maximise cover width without sacrificing performance and is ideal for economic roofing of contemporary style homes.
- ▶ unidek has improved water tight design with anti-capillary groove and internal valley. The internal valley acts as support during installation and drainage system against water leakage.
- ▶ With the availability of many attractive Clean Colorbond® colours and the combination of the superior life span of Zinalume® steel unidek is indeed very appealing for many building designs.

Common uses of this product

unidek is a versatile roofing profile that is suitable for both roofing and walling in industrial, commercial, agriculture and domestic applications. It can be custom-cut to length and even formed on site to meet the changing requirement of building construction.

Schematic



Warranty

unidek roofing has a back to back material perforation warranty from BHP Steel Malaysia of up to 20 years upon meeting all the requirements.

Warnings

- ▶ Minimum recommended roof pitch for unidek is 3 degrees with roof length up to 12m.
- ▶ Copper and Lead are incompatible materials and should NOT be used with unidek roofing.
- ▶ Use only acetic-free sealant on unidek roofing.
- ▶ Manual cutting is recommended. Avoid circular saw cut that result in having hot particles falling onto unidek roof sheets.
- ▶ Walk only in pans over the supports of unidek roofing.

Colour Range

unidek is readily available in popular Clean Colorbond® colours. Colour matching of unidek roofing is possible upon meeting a minimum order quantity.



Physical Properties

		Mass and Yield					
		Clean Colorbond®			Zinalume®		
Base Steel Thickness (BMT)	Total Coating Thickness (TCT)	kg/m	kg/m ²	m ² /t	kg/m	kg/m ²	m ² /t
0.35mm	0.41mm	2.804	3.680	272	2.734	3.584	279
0.42mm	0.48mm	3.348	4.393	228	3.281	4.306	232

Materials

unidek is readily available in BHP G550 High-Tensile Zinalume® steel and Clean Colorbond® steel. Other materials are also available on request.

Zinalume® steel, AZ150 G550

Zinalume® steel is a high-tensile G550 steel with a minimum yield strength of 550Mpa and a metallic coating with composition of 43.5% zinc, 55% aluminium & 1.5% silicon (AZ150) which conforms to Australian Standard ASI397 and Malaysian Standard MSI 196. The practical and aesthetic merits of Zinalume® steel include durability, longer lasting life, formability and excellent corrosion resistance. Thus Zinalume® steel is able to last up to 4 times longer than galvanized steel (GI) and prepainted galvanized steel (PPGI). Zinalume® steel supplied by BHP Steel (Malaysia) Sdn Bhd has a clear resin coating which gives it a beautiful, satin-smooth finish.

Other Materials

unidek can be produced to the following BHP materials:

- ▶ Clean Colorbond® ULTRA AZ200 G550 steel.
- ▶ Clean Colorbond® XPD Pearlescent AZ150 G550 steel.
- ▶ PrimaMaju AZ100 G550 steel.
- ▶ PrimaVilla AZ90 G550 steel.

Note: Kindly refer to BHP Steel brochures for more details.

Capacity and Load Table

Span Between Support (mm)	0.41mmTCT		0.48mmTCT	
	Loading (kg/m ²)	Deflection (mm)	Loading (kg/m ²)	Deflection (mm)
500	700	0.6	-	-
700	390	1.3	-	-
850	260	1.8	500	2.8
1,000	190	2.6	380	4.1
1,150	145	3.4	280	5.3
1,300	110	4.2	220	6.8
1,450	90	5.5	180	8.6
1,600	75	6.6	140	10.0

Quality Control

With the certification of MS/ISO 9001:2000 Quality Management System, UGI ensures high quality Clean Colorbond® and Zinalume® steel are precisely cold formed into unidek steel roofing sheet.

clean Colorbond® steel, AZ150 G550

Clean Colorbond® is the pre painted Zinalume® steel with the ability to prevent tropical dirt staining and better colour retention. Clean Colorbond® paint system is oven cured with nominal gloss of 25% which conforms to Australian Standard AS2728 Category 3. The advantages of using Clean Colorbond® are:

- ▶ Ability to resist dirt staining up to 5 years.
- ▶ No cracking, flaking or peeling up to 10 years under normal well-washed exposure condition.
- ▶ No perforation due to corrosion up to 20 years under normal well-washed exposure condition.
- ▶ Certified to BOMBA Class 'O' (AS1530).
- ▶ Heat resistance up to 100 degrees Celsius.

Spanning Table

	0.41mmTCT/0.35mmBMT			0.48mmTCT/0.42mmBMT		
	Single	End	Internal	Single	End	Internal
Roof	800	900	1,200	940	1,040	1,500
Walling	1,200	1,300	1,500	1,600	1,800	2,000

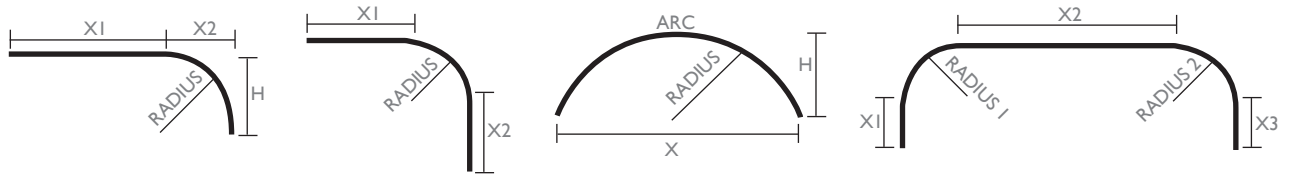
Lengths

unidek is produced in length up to 12m. However, longer length is available provided transport and on-site handling can be arranged. Site forming of unidek is also available on request.

Tolerances

Length +/- 10mm
Cover width +/- 4mm

Type of Crimp Curve



Spring/Crimp Curved

unidek roofing can be natural sprung or machine crimp curved to various shapes and sizes as shown in the diagram above. For more information on minimum radius and maximum length of unidek natural or crimp curve, please refer to the table.

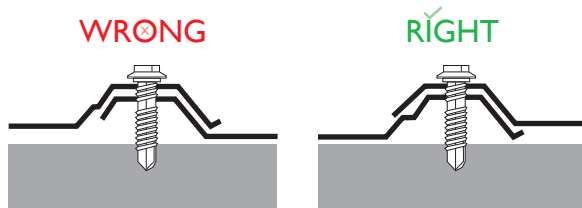
Spring/Crimp Curve Specification

	Criteria	
Crimp Curve	Minimum radius	550mm
	Maximum arc length	6,000mm
Spring Curve	Minimum radius	20,000mm
	Maximum length	12,000mm

Side Lapping

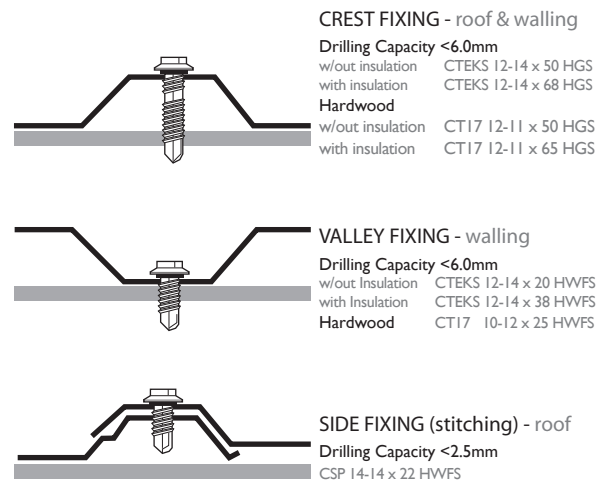
The correct side lapping of unidek sheets should have the male rib (rib with anti-capillary groove) covered by the female rib as shown in the diagram below.

Note: For more information on installation of unidek and



Fastening Details

To match the performance of unidek roofing and cladding in Clean Colorbond® or Zinalume® steel, the fasteners must conform to AS3566 Class 3 to avoid incompatibility of material which reduces durability.



Thermal/Noise Insulation

unidek steel roofing is best installed with proper thermal and noise insulation. A common method is to lay a layer of wire netting over battens, then a layer of double sided aluminium foil, followed by a 25mm wool, and finally unidek steel roofing sheets.

Accessories

Ridge Capping, Valley Gutter, Wall Flashing and Rain Gutter.

