

NS BLUESCOPE LYSAGHT MALAYSIA

LYSAGHT® STYLEDEK® OPTIMA™

Steel Roof Tile Panels



Structural Solutions



Roofing & Walling Solutions

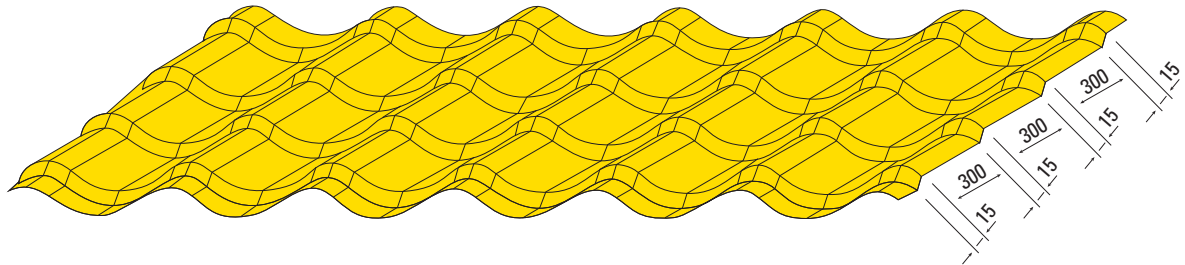


House Framing Solutions



LYSAGHT® STYLEDEK® OPTIMA™

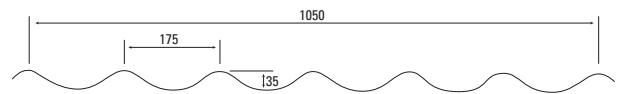
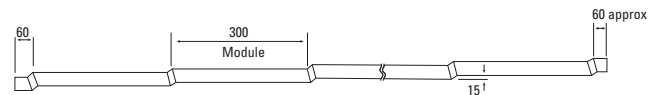
Steel Roofing Tile Panels



PRODUCT PROFILE

LYSAGHT® STYLEDEK® steel roofing tile panels has the aesthetic appearance of conventional roofing tiles at one-tenth the weight of clay tiles. Developed in the mid 1980s, LYSAGHT® STYLEDEK® has gone through 3 generations of improvements, namely LYSAGHT® STYLEDEK®, LYSAGHT® STYLEDEK® II and now LYSAGHT® STYLEDEK® OPTIMA™.

LYSAGHT® STYLEDEK® OPTIMA™ is part of the new range of OPTIMA™ series developed using wide coils of 1219mm. The six panel structure of LYSAGHT® STYLEDEK® OPTIMA™ ensure best coverage and optimal installation works without compromising on the water tightness. In addition, LYSAGHT® STYLEDEK® OPTIMA™ panels lower the risk of roof entry burglaries as a result of the reduced possible entry points and the high strength of the steel.

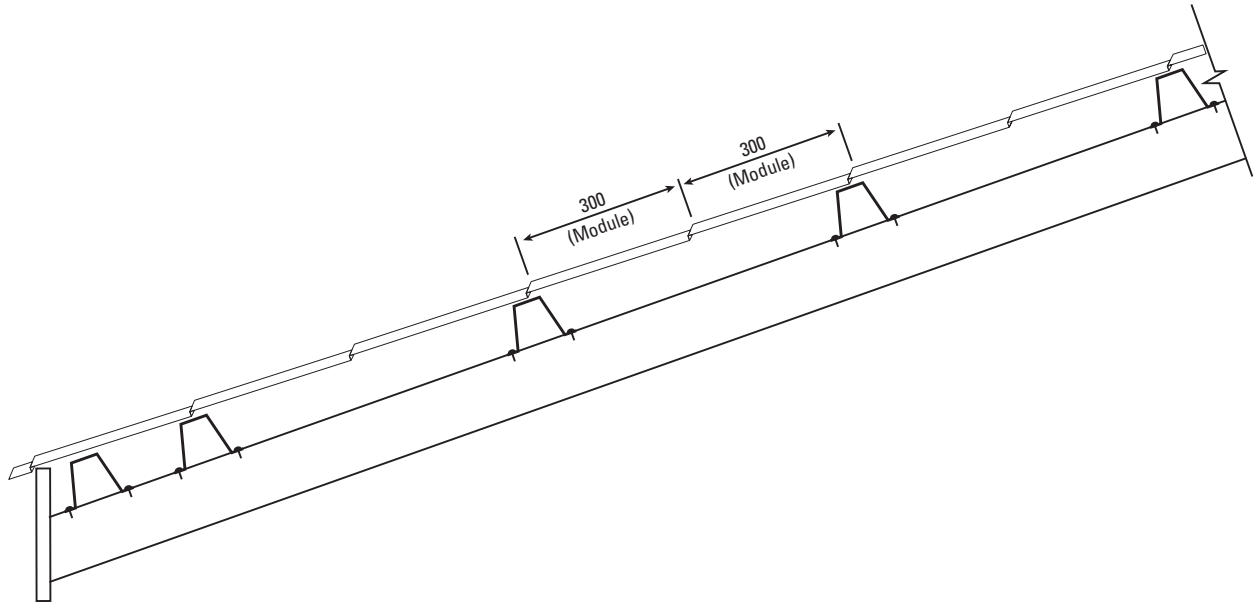


PHYSICAL PROPERTIES

	STANDARD
Thickness	
Base Metal Thickness (BMT) in mm	0.42
Total Coated Thickness (TCT) in mm	0.47
Mass	
Mass per unit area kg/m ²	4.15
Effective width coverage (mm)	1050
Depth of Rib (mm)	35
Step Height (mm)	15
Maximum Allowable Support Spacings	
End Span (mm)	300
Internal Span (mm)	600
Roof Pitch	
Minimum Recommended Pitch (degrees)	15°
Grade of Steel	
Coating class (min)	G300 (300 N/mm ² yield strength) AZ150
Tolerances	
Length (mm)	+0, -15mm
Width (mm)	+10, -0mm
Packing	In strapped bundles of approximately 1 tonne
Custom Cut Lengths	The minimum length is 3 modules (1020mm)

METHOD STATEMENT SUPPORT SPACING

LYSAGHT® STYLEDEK® OPTIMA™ is supported by roof battens at every alternate step, i.e. 600mm spacing except at the eaves where the first two battens will be more closely spaced. Also, the last two battens at the top of the roof may have to be spaced to suit the length of the sheets, if the sheets are cut on site.



LAYING AND FASTENING OF LYSAGHT® STYLEDEK® OPTIMA™ ROOFING PANELS

FASTENERS




The steel roof cladding shall be fastened using recommended Class 3 (conforming to AS3566 Class 3) self drilling zinc coated fasteners.

- **For LYSAGHT® STYLEDEK® OPTIMA™ to timber battens**
Use of AT 12 -14 x 65 DGS or TD 665 HM screws with seal.
- **For LYSAGHT® STYLEDEK® OPTIMA™ to steel battens**
Use of A3 12 – 14 x 65DGS or DX 76065 HM screws with seal to fasten to steel purlins not more than 5.5mm
- **Capping and Flashings to LYSAGHT® STYLEDEK® OPTIMA™**
Use A3 12 – 15 x 20 HXW or RX 520 HM screws with seal for capping

FASTENERS LOCATION AND FREQUENCY

At the eaves batten, insert fasteners as shown. For the next batten 1 which is after the eaves batten, insert fasteners as shown in diagram.

From this batten onwards, when working upwards;

- Insert a fastener at every two modules at side laps (internal span) 
- Insert a fastener at every two modules in between side laps 
- Insert a fastener at every crest at horizontal overlap 



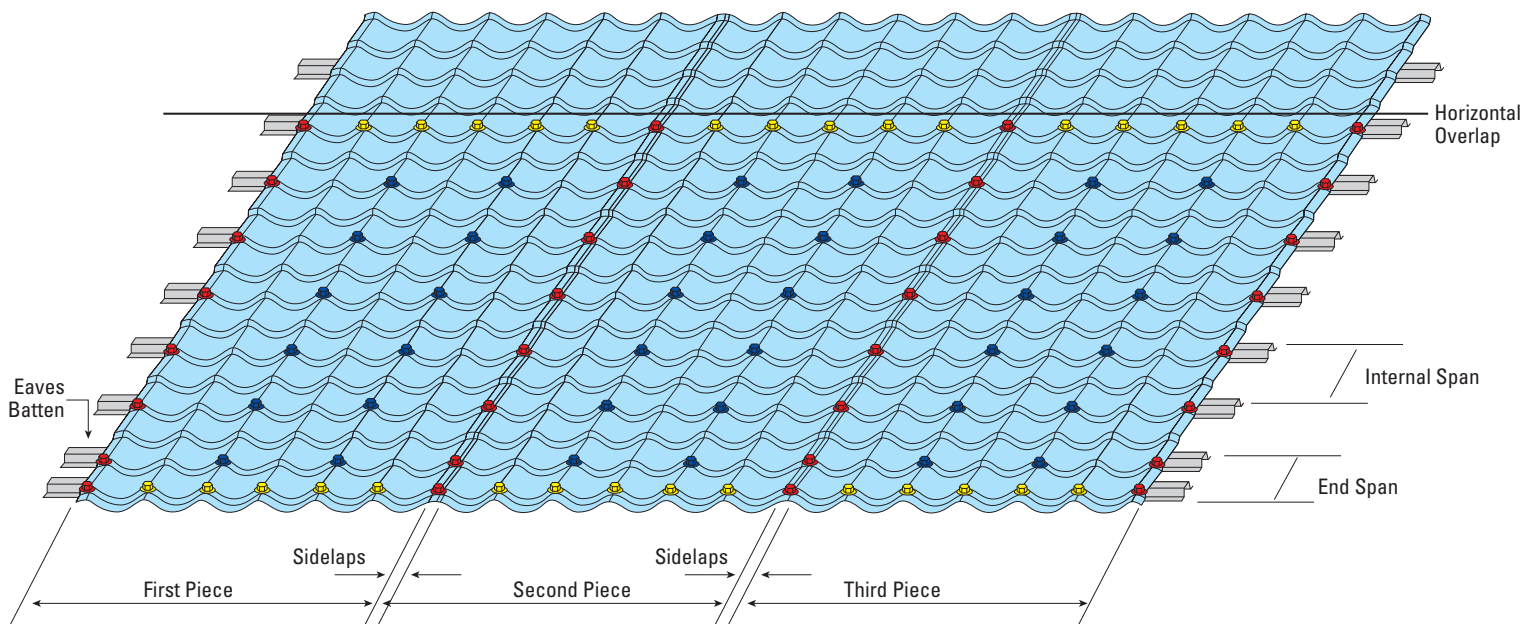
Timber Battens
Fastener



Steel Battens
Fastener



Capping & Flashing
Fastener



REFERENCE

 Fastener location



FINISHING AT A GABLE END OR END WALL WHEN STARTING FROM A HIP OR VALLEY

When starting from a hip or valley and working towards a gable end or end wall, locate the first full length sheet at a multiple of 1050 (the sheet cover width) plus 20mm clearance, from the edge of the sheet to inside the gable fascia or end wall. This will allow full width sheets to be installed without the last sheet.

Before installing the last sheet, a barge gutter must be fitted against the inside of the barge board or end wall (as shown in the diagram).

When the last sheet is fastened in place over the barge gutter, the barge capping can be fitted.

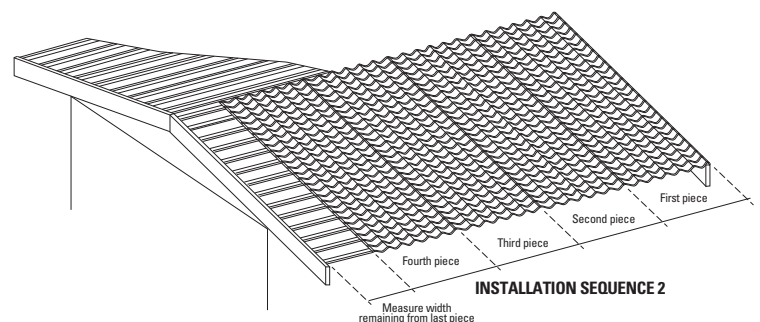
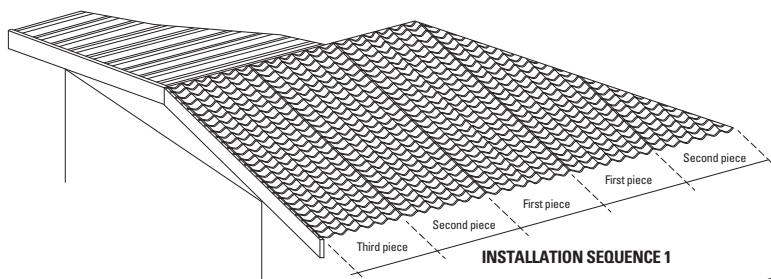
INSTALLING SHEETS BETWEEN GABLE ENDS AND AN END WALL OR BETWEEN END WALLS

When starting sheet installation from a gable end or an end wall, it is most likely the last sheet will have to be cut to width.

Sheets can be cut longitudinally with a power saw or hand saw.

After measuring the cover width required for the last sheet, the cut should be made along the valley side of the last crest that will fit into the space, so that a barge gutter can be positioned under the downwards sloping edge to trap moisture penetration. The arrangement would be similar except an additional packing piece may be required to secure the barge gutter in place.

Also, depending on the dimension from the last crest to the barge board or end wall, a wider barge capping or end wall flashing may have to be made. However, this should not have to be more than 250mm wide.



GENERAL SPECIFICATION

PROFILE

LYSAGHT® STYLEDEK® OPTIMA™ panel has a cover width of 1050 with a nominal step height of 15mm. The nominal crest height is 35mm and shall have a normal pitch of 175mm centre to centre.

STEEL GRADE AND THICKNESS

The base metal used shall conform to Australia Standard AS1397 – 1993 and shall be 0.42mm BMT with minimum yield strength of 300MPa.

PROTECTIVE METALLIC COATING

All steel sheets used in the manufacture of the roofing sheets shall have a protective metallic coating of zinc (43.5%), Aluminium (55%) and Silicon (1.5%) applied by the hot dip process and having a coating thickness (total both sides) of 0.05mm as stipulated in AS1397 – 1993 for coating of AZ150.

ACCESSORIES

Flashings, cappings, trims and rainwater goods shall be manufactured from the same materials as the steel roof cladding to achieve material compatibility. Material warranty against corrosion, discolouration, and tropical dirt staining to be provided by the manufacturer after the completion of jobs. Installation procedure and fixing method to strictly follow the standards and recommendations of the manufacturer.

OPTION FOR PREPAINTED STEEL

Coated sheet shall be factory painted and oven baked to AS2278.

a) CAPERO® steel

Recommended for residential roof with moderate environment

Top coat : Custom formulated polyester paint system with 14µm over 3µm of universal corrosion inhibitive primer

Reverse coat : Custom formulated Texture Grey with 5µm nominal dry film thickness

b) Clean COLORBOND® THERMATECH™ steel

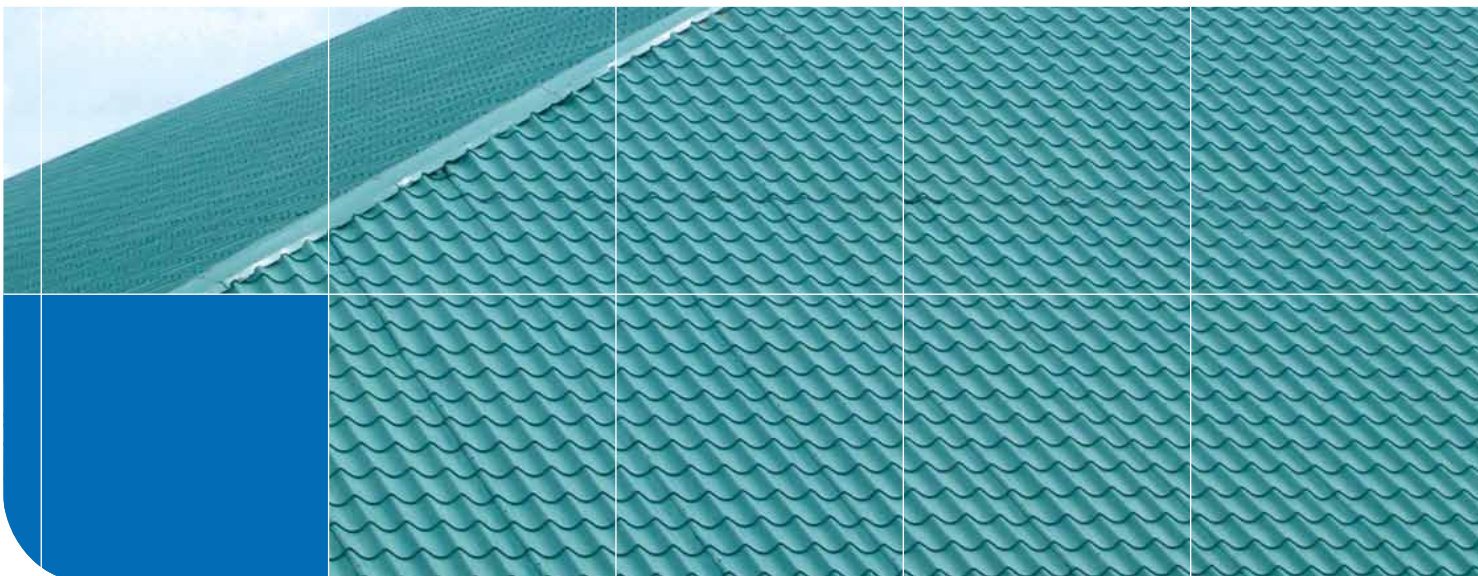
Recommended for moderate marine environment

Top coat : Custom formulated polyester paint system with nominal thickness of 20µm over 5µm of universal corrosion inhibitive primer

Reverse coat : Custom formulated Shadow Grey with nominal thickness of 5µm over 5µm of corrosion inhibitive primer

COLOUR RANGE

See BlueScope's colour chart showing the standard colours available for this profile.



GENERAL NOTES

COMPATIBILITY

Most material traditionally used in contact with galvanized steel can be used with CAPERO® steel and Clean COLORBOND® THERMATECH™ steel. However, LEAD AND COPPER ARE NOT TO BE USED. Also, copper gutters, pipes, etc must not be discharged on to CAPERO® steel and Clean COLORBOND® THERMATECH™ steel products. Where condensation may occur, zinc coated and painted steel purlins must be used to avoid contact between bare steel and the sheeting.

SEALED JOINTS

As it is not practical to solder CAPERO® steel or Clean COLORBOND® THERMATECH™ steel, use screws or rivets and silicon sealant where sealed joints are required. Only sealants branded as suitable for use with galvanized or ZINCALUME® steel should be used. Suitable sealants include GE Silglaze-N or Silpruf, Dow Corning (Selleys) 780, Poly-Flexiseal All Purpose Silicone and Fuller Silicone.

CARE AND STORAGE PRIOR TO INSTALLATION

Roofing sheeting is normally delivered in strapped bundles which must not be exposed to water. If not required for immediate use, bundles should be stacked clear off the ground and, if left in the open, protected with waterproof covers. Moisture trapped between the surfaces of nested sheets cannot evaporate normally and can cause unsightly coating damage which may reduce the life span of the product. If bundles become wet, the sheet should be separated, wiped with a clean cloth and stacked so that air circulation completes the drying process.

HANDLING ON SITE

Long length bundles should be lifted using a spreader bar and fabric slings. To protect the surface, and for personal safety, roof sheeting should only be handled using clean dry gloves. The sheets should not be dragged over rough surfaces or each other, nor should tools, etc be dragged over the sheeting.

WALKING ON ROOF SHEETING

When walking ALONG the length of LYSAGHT® STYLEDEK® OPTIMA™, walk on at least 2 ribs and on supports. When walking ACROSS the length of roof sheeting, especially overhangs, walk over or close to the roofing supports. Generally, keep weight evenly distributed over the soles of the feet, not concentrated on heel or toe. Always wear soft soles and avoid the ribbed type that pick up and hold small stones. Sheets taken freshly from packs may be slippery and care should be taken when walking over them.

CUTTING SHEETS ON SITE

When cutting roof sheeting with power saw, care should be taken to protect the material from swarf. Whenever possible, cutting should be done on the ground and not over coated materials. Sheets should be placed face down on padded supports to reduce damage to the surface caused by hot swarf.

In power saws, metal cutting blades are preferred to carborundum discs as they produce fewer damaging hot metal particles and leave less burr with no burnt edges on the cut sheet.

PAINTING

Spray packs and touch up paints are not recommended. Please contact your local NS BlueScope Lysaght office for overpainting requirements.

CLEANING UP

Normal installation practices eg. drilling, cutting, etc usually leave metallic swarf on or around the roof areas. This material and all other debris, including blind rivet shanks, nails, screws, etc, should be swept from the roof area and gutters regularly at the end of each day's work and particularly on completion of the installation. Failure to do so can result in unsightly staining of the surface as the metal particles oxidize. Corrosion and possible failure of the zinc/aluminium coating may occur when steel, lead or copper based materials are left in contact with ZINCALUME® steel and moisture.

Superficial damage to prepainted surfaces are usually neither harmful nor noticeable and should not be overpainted unless obvious. When repair is necessary, Clean COLORBOND® THERMATECH™ steel Touch up Enamel should be used sparingly as the dried enamel weathers differently to the over baked finish of Clean COLORBOND® THERMATECH™ steel.

HOW TO ORDER

When ordering, please specify the number and length of sheets, thickness of material (CAPERO® steel and Clean COLORBOND® THERMATECH™ steel), colour, etc, and order the necessary fasteners using NS BlueScope Lysaght fastener code.

ADVERSE CONDITIONS

Unlike galvanized products, ZINCALUME® steel is suitable for most corrosive environments. If LYSAGHT® roofing and walling products are used in salt marine locations, in severe industrial or unusually corrosive environments, refer to the NS BlueScope Lysaght Corrosion Resistance Product Recommendation sheet available from your NS BlueScope Lysaght office.

PERFORMANCE

LYSAGHT® roofing and walling products will perform as specified if fixed in accordance with good trade practice and recommendations set down in this and other relevant literature.

TECHNICAL SERVICE DEPARTMENT

Should an application outside the scope of this brochure arise, advice is available from the NS BlueScope Lysaght Technical Service Department. All relevant details should be provided to your nearest NS BlueScope Lysaght office.

SPECIFICATIONS

The information contained in this literature is correct at time of printing. However, specifications are subject to change without prior notice.



Trusted Partner for Building Systems

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