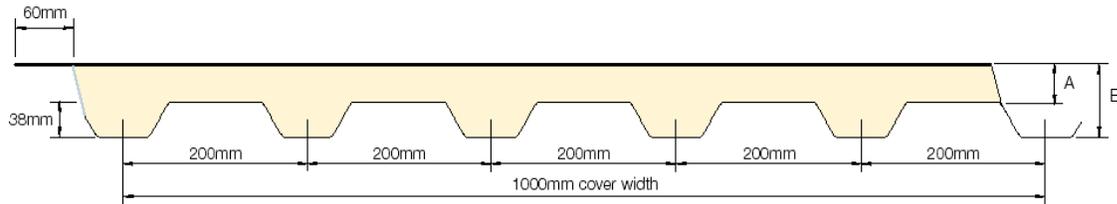


Product: KS1000TD Topdek EcoSafe Insulated Single Ply Roof Deck



APPLICATION

The Kingspan KS1000TD Topdek EcoSafe Insulated Single Ply Roof Deck is a Composite Insulated Single Ply Roof Deck which can be used for all building applications where the roof slope is 1:80 (0.72°) or more after deflection. Also suitable for curved roof applications with convex curve (45m radius) and concave curve (50m radius).

AVAILABLE LENGTHS

- Standard lengths 1.5 - 12m
- Longer lengths (non-standard) 12 - 16m
- Shorter lengths (non-standard) below 1.5m

Please note: additional costs and transport restrictions may apply to for non-standard lengths. All lengths may change for export (outside of UK).

DIMENSIONS & WEIGHT

Core thickness (mm)	34	46	68	71	80	91	100	120
Overall Thickness (mm)	72	84	106	109	118	129	138	158
Weight kg/m² 0.7mm liner	10.7	11.1	12.0	12.1	12.5	12.9	13.3	14.1

PANEL END CUT BACK

- Standard 60mm
- Flush One end flush

HANDING

The KS1000TD Topdek Insulated Single Ply Roof Deck can be manufactured in left to right handed (TDY), right to left handed (TDX) or butt ended (TDP).

PRODUCT TOLERANCES

Cut to Length	-0.05%	+0.1%
Cover Width	-0mm	+3mm
Thickness	-2mm	+2mm
End Square	-3mm	+3mm

MATERIALS - STEEL

Substrate

Bright White Polyester:

S220GD+ZA hot-dip zinc alloy coated steel to BS EN10326. Standard internal sheet thickness 0.7mm.

Membrane:

Standard external membrane thickness 1.5mm.

Coatings - External Weather Membrane

High performance PVC single ply membrane from one of the following manufacturers: Armourplan (IKO) or Sika (Trocal).

Coatings - Internal Liner Sheet

Bright White Polyester:

The coating has been developed for use as the internal lining of insulated panels. Standard colour is "bright white" with an easily cleaned surface.

Kingspan AquaSafe:

The coating has been developed for use as an internal lining of insulated panels to suit high-humidity internal environments, class 5 as defined by the Building Regulations.

Kingspan CleanSafe:

The coating has been developed for use as the internal lining of insulated panels where a high level of cleanliness and hygiene is required, and the panels are to be cleaned down on a regular basis (minimum order quantities apply).

Stainless Steel

The stainless steel liner has been developed for use as the internal lining of insulated panels in buildings with a very aggressive/corrosive internal environment (minimum order quantities apply).

INSULATION CORE

Polyisocyanurate (PIR): EcoSafe LPCB certificated PIR formulation.

ENVIRONMENTAL

The KS1000TD Topdek Insulated Single Ply Roof Deck has a Green Guide A + rating as per the BRE Global "The Green Guide To Specification", Green Guide 2008 ratings. Green Guide element no.81254003.

PERFORMANCE

THERMAL INSULATION

The Kingspan KS1000TD Topdek Insulated Single Ply Roof Deck has a Thermal Transmittance (U value), calculated using the method required by the Building Regulations Part L2 (England & Wales) and Building Standards Section 6 (Scotland).

Core Thickness (mm)	34	46	68	71	80	91	100	120
U Value (W/m²K)	0.45	0.37	0.35	0.25	0.23	0.20	0.18	0.15

BIOLOGICAL

Kingspan panels are normally immune to attack from mould, fungi, mildew and vermin. No urea formaldehyde is used in the construction, and the panels are not considered deleterious.

FIRE

The internal face of the panel to be Class 0 in accordance with the Building Regulations when tested to BS476: Parts 6: 1989 and Part 7: 1987.

The panels are rated FAA or FAC (depending on membrane used) when tested to BS476: Part 3: 2004.

The system has passed all the requirements of LPS1181: 2005: Part 1: Issue 1, ceiling lining tests. Loss Prevention Certification (LPCB) certified to LPS 1181 Grade EXT – B.

ACOUSTIC

Predicted Sound Reduction Index (SRI)

Frequency Hz	125	250	500	1k	2k	4k
SRI dB	18	18	17	23	30	40

The KS1000TD Topdek Insulated Single Ply Roof Deck has a single figure weighted sound reduction $R_w = 23\text{dB}$.

AIR LEAKAGE

Overall air leakage for the complete envelope is $5\text{m}^3/\text{hr}/\text{m}^2$ at 50Pa (when Kingspan panels are used for roof and wall). Please note: lower air leakage rates can be achieved subject to panel specification.

QUALITY & DURABILITY

The KS1000TD Topdek EcoSafe Insulated Single Ply Roof Deck is manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, complying with ISO 9001 standard, ensuring long term reliability and service life. The panel has also been manufactured under Environmental Management System Certification ISO 14001. Compliant to BS OHSAS 18001 Occupational Health and Safety.

GUARANTEES

Kingspan TOTAL Panel Guarantee covering the structural and thermal performance for a period of up to 15 years and Membrane guarantee for a period of up to 15 years (subject to project specific information).

PACKING

Standard Packing

KS1000TD Topdek EcoSafe Insulated Single Ply Roof Deck panels are stacked weather sheet to weather sheet (to minimise pack height). The top, bottom, sides and ends are protected with foam and timber packing and the entire pack is wrapped in plastic. The number of panels in each pack depends on panel thickness, as shown in the table. Typical pack height is 1100mm.

Panel Core (mm)	34	45	68	71	80	91	100
No. Panels (max)	14	14	10	10	10	8	8

SEA FREIGHT

Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

DELIVERY

All deliveries (unless indicated otherwise) are by road transport to project site. Off loading is the responsibility of the client.

SITE INSTALLATION PROCEDURE

Site assembly instructions are available from the Kingspan envirocare Technical Services.

STRUCTURAL

Unfactored load/span table (use calculated design windload values unfactored)

Span condition	Uniformly distributed downward loads (kN/m ²)										
	Span L in Metres										
0.66mm Deck	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0
Single	11.19	6.47	4.08	2.73	1.92	1.40	1.05	0.81	0.64		
Double	9.10	6.74	5.20	4.13	3.37	2.80	2.36	1.95	1.53	1.23	1.00

Above figures are for all panel thicknesses.

Fastener table based upon minimum 1.5mm thick steel purlins and suction load on panel*.

The following deflection limits have been used:

Downward loading L/250

Suction loading L/150

Wind uplift capacity of the panels is dependent on the fixing pattern and it is usually this design condition which is critical for any roofing system.

The wind load is unique to each project and calculation, the wind loads should be in line with BS6399Part 2.