



Topdek Single Ply Insulated Roof Deck KS1000 TD Data Sheet



KS1000 TD Topdek

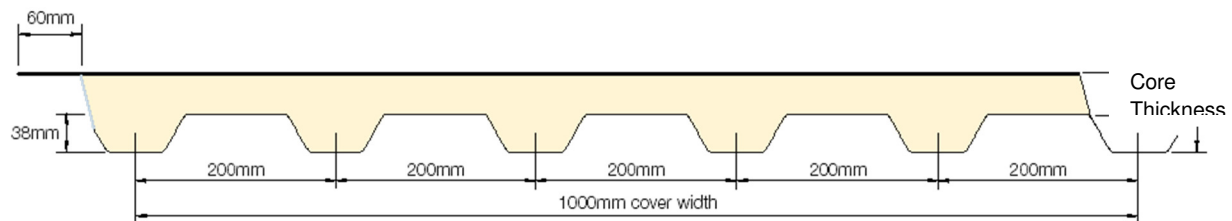
Applications

The KS1000 TD Topdek is a single component, factory pre-engineered roof deck, comprising a high performance single-ply PVC membrane with insulation and a trapezoidal steel deck, which is suitable for flat and pitched roofs above 1:80 (0.72°) after deflection. It is also suitable for curved roof applications with a convex curve (45m radius) and concave curve (50m radius).

Available Lengths

Standard Lengths	2m – 14.5m
Longer Lengths (non-standard)	14.5m – 16m
Shorter Lengths (non-standard)	Below 2m

Note: Additional costs and transport restrictions may apply for non-standard lengths. All lengths may change for export (outside of the UK).



Dimensions, Weight & Thermal Performance

Core Thickness (mm)	34	71	91	100	120
Overall Thickness (mm)	72	109	129	138	158
U-value (W/m²K)*	0.48	0.25	0.20	0.18	0.15
Weight kg/m² 0.5 Steel/0.4 Steel	9.0	10.5	11.3	11.7	12.5

The KS1000 LP insulated roof panels have a Thermal Transmittance (U value), calculated using the method required by the Building Regulations Part L2 (England & Wales) and Building Standards Section 6 (Scotland).

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Insulation Core

KS1000 TD insulated roof panels are manufactured with an ECOsafe and FIREsafe polyisocyanurate (PIR) core.

Fire

The internal faces of the panel to be Class 0 in accordance with the Building Regulations when tested to BS 476: Part 6: 2009 and Part 7: 1997. The panel is rated SAA when tested to BS 476: Part 3: 2004

This FIREsafe system has passed all the requirements of LPS1181: 2005: Part 1: Issue 1.2, ceiling lining tests by the Loss Prevention Certification Board (LPCB) certified to LPS 1181 Grade EXT-B and FM approval to 4471 Class 1 fire classification, unlimited height, for roof applications.



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

Materials

Substrate

CLEANsafe 15: Metallic protected steel to BS EN10346:2015.thickness 0.4mm

- Membrane: Standard external membrane thickness: 1.5mm.

Coatings - External Weather Sheet

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

Coatings - Internal Deck

- Kingspan CLEANsafe 15: The coating has been developed for use as the internal lining of insulated panels. Standard colour is "bright white" with an easily cleaned surface.

Environmental

Kingspan Insulated Panels produced in the UK are certified to BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) 'Very Good'. Kingspan Insulated Panels directly contribute to BREEAM/LEED credits.

Air Leakage

An air leakage rate of 3m³/hr/m² at 50Pa or less can be achieved when using Kingspan insulated roof and wall panels.

Acoustic

Sound Reduction Index (SRI)

Hz*	125	250	500	1K	2K	4K
SRI (dB)	18	18	17	23	30	40

* Frequency

The KS1000 TD insulated roof panel has a single figure weighted sound reduction $R_w = 23dB$.

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Panel End Cut Back

Standard Cut Back Eaves	60mm
Flush	One end flush

Note: Additional costs apply for flush ended panels and tolerances will be greater. Further information is available from Kingspan envirocare Technical Services.

Product Tolerance

Cut to Length	-5mm +5mm
Cover Width	-0mm +3mm
Thickness	-2mm +2mm
End Square	-3mm +3mm

Handling

The KS1000 TD insulated roof panel can be manufactured in both left to right handed (LH) and right to left handed (RH).

Quality & Durability

KS1000 TD insulated roof panels are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, complying with BS EN ISO 9001 Standard, ensuring long term reliability and service life. The panels are also being manufactured under Environmental Management System Certification BS EN ISO 14001. Compliant to BS OHSAS 18001 Occupational Health and Safety.

Warranty

Kingspan Panel Warranty covering the following subject to project specific information:

- Up to 15 year thermal performance warranty;
- Up to 15 year structural performance warranty;
- Up to 15 year membrane warranty

Packing

KS1000 TD insulated roof panels are stacked weather sheet to weather (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.

Core Thickness (mm)	34	71	91	100	120
No. of panels in Pack	20	12	10	10	7

Note: Applies to UK pack sizes. Please contact Kingspan Technical Services for export information.

Sea Freight

Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional costs. 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 Kingspan envirocare Technical Services.

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Structural Tables

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

0.5mm Deck

Span Condition	Span L in metres										
Downward	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0
Uniformly distributed loads kN/m ²											
Single	6.72	3.89	2.45	1.64	1.15	0.84	0.63	0.49	0.38	-	-
Double	5.56	4.08	3.13	2.47	2.01	1.65	1.36	1.14	0.92	0.74	0.60

Span Condition	Span L in metres										
Suction	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0
Uniformly distributed loads kN/m ²											
Single	6.59	4.57	3.36	2.57	2.00	1.46	1.09	0.84	0.66	0.53	0.43
Double	7.75	5.38	3.96	3.03	2.39	1.94	1.60	1.35	1.15	0.99	0.86
Triple	9.69	6.73	4.94	3.79	2.99	2.42	2.00	1.60	1.26	1.01	0.82

Notes:

1. Above figures are for all panel thicknesses.
2. Fastener table based upon minimum 1.5mm thick steel purlins and suction load on panel*.
3. Deflection limit for: downward loading is L/250 and suction is L/150.
4. The actual wind suction load resisted by the panel is dependent on the number of fasteners used and the purlin thickness as well as the fastener material.
5. 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.

UK

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xx/2018