Kerto® LVL
Q-panel

Kerto® LVL Q-panel is a load-bearing and dimensionally stable product that can be used in both horizontal and vertical structures. Q-panel can be used in the most demanding applications. Use of large Q-panel ensures material efficiency and minimizes installation time.

Kerto LVL Q-panel is made of 0.12 inches thick strength graded softwood veneers of which approximately 20 % are oriented in crosswise direction. The veneers are bonded with weather- and boil-resistant phenol formaldehyde adhesive. Q-panel has outstanding strength-to-weight ratio. Crosswise veneers ensure excellent dimensional stability and enhance the transverse strength and stiffness of the panel.

Q-panel is an ideal material for load-bearing applications including floor, wall and roof elements due to its stiffness, strength properties and light weight. It can be used in both horizontal and vertical applications.

APPLICATIONS

Structural applications:
- Panel product for roof, floor and wall constructions
- High and slender beams
- Headers and lintels
- Portal frames

Industrial applications:
- Free shaped beams and panels (CNC machining)
- Components for prefabricated roof, floor and wall elements and modules
- Doors and windows
- Concrete formwork

MAJOR ADVANTAGES

- **Strong and rigid**
- **Excellent strength-to-weight ratio**
- **Dimensional stability improved against warp and twist**
- **Great workability and quick to install**
- **Easy to fasten, nail and drill**
- **Ensures material efficiency with customized product dimensions**
- **High and slender beams for energy efficient constructions**
- **Large panels up to 98” wide, 82’ long**
- **Made of sustainable Nordic Wood and PEFC (PEFC/02-31-03) certified**
- **Environmentally friendly**
- **Kerto LVL (1 ft³) contains on average stored carbon equivalent to 48.88 lbs CO_2**

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APPROVALS AND DESIGN PROPERTIES

Kerto LVL Q-panel has ICC-ES evaluation report ESR-4831 and the allowable design values are stated in this report. Quality and performance testing is carried out under a quality control program by ICC-ES with regular inspections and audits by Eurofins Expert Services Oy.

Kerto LVL production is managed according to principles of standard ISO 9001.

STANDARD SIZES

All Q-panels thicknesses are available in standard widths 2 ft, 3 ft, 4 ft, 6 ft and 8 ft.

Special dimensions are available on request.

OVERALL DIMENSIONS

	MINIMUM	MAXIMUM
Thickness	0.82″	2.95″
Width/height	8″	98″ **
Length	78″ *	82′ **

* Short lengths (< 78″) and widths under 8″ are available on request.
** For products wider than 72″, maximum length is 66′. For lengths of more than 52′ or widths of more than 96″, please confirm with logistics first.

STANDARD TOLERANCES

	SIZE	MINIMUM	MAXIMUM
Thickness	≤ 1 1⁄16″	- 0.04 in	+ 0.04 in
	1 1⁄16″ to 2¼″	- 0.08 in	+ 0.08 in
	> 2¼″	- 0.12 in	+ 0.12 in
Width/height	< 16″	- 0.08 in	+ 0.08 in
	≥ 16″	- 0,5 %	+ 0,5 %
Length	All	- 0.20 in	+ 0.20 in

In moisture content of 10 ±2 %. Special tolerances are available on request.

SANDING OF KERTO LVL AFFECTS PRODUCT THICKNESSES

- Optical sanding reduces the original nominal thickness by approximately0.04 in. The standard thickness tolerances apply to the sanded nominal thickness. Structural design shall be made according to the sanded nominal thickness.
- Calibrated sanding reduces the original nominal thickness by approximately 0.12 in. The thickness tolerance of calibrated sanded products is +/- 0.02 in from the target thickness. The dark glue line may become visible as it is allowed to sand through the face veneers. Structural design shall be made according to the sanded nominal thickness.

BONDING

Kerto LVL is bonded with a weather- and boil-resistant phenol formaldehyde adhesive. The gluing meets the requirements of the standard EN 14374. The face veneer scarf joints on the front side of the product are glued with colourless adhesive.

During hot pressing the adhesive cures as thermoset plastic, and therefore is inert and non-hazardous to humans and animals.

PANEL CONSTRUCTIONS

Thickness	NUMBER OF PLIES	LAY-UP
21	7	I–III–I
21	7	II–I–II
24	8	II–II–II
27	9	II–III–II
30	10	II–IIII–II
33	11	II–IIIII–II
39	13	II–III–III–II
45	15	II–IIII–IIII–II
51	17	II–IIIII–IIIII–II
57	19	II–III–IIIII–III–II
63	21	II–III–III–III–III–II
69	23	II–IIII–III–III–IIII–II
75	25	II–IIIII–III–III–IIIII–II

Special constructions are available on request.

FORMALDEHYDE EMISSIONS

Determined according to EN 717-1, the formaldehyde emitted by Kerto LVL falls far below the Class E1 requirement of ≤ 0.100 ppm, and also fulfils the most stringent requirements in the world (≤ 0.030 ppm). The formaldehyde emission of Kerto LVL is approximately 0.018 ppm.

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FURTHER PROCESSING

Kerto LVL Q-panel can be further processed in various ways according to end-use requirements.

Sanding	Optical sanding, 2 sided only Calibrated sanding, 2 sided only
Edge profiling	Tongue and groove, half-lap
Machining	Machined to special size and shape, notches and holes
Multiple-gluing (GLVL)	See separate product data sheet for GLVL
Temporary weather protection	...
End painting	Protective painting for the ends of the beams
Treatment against mould	...
Treatment against termites	...

PACKAGING

Products are packed in moisture-resistant plastic wrapping or packing hoods. Packages can be stored outside only temporarily. Longer-term storage is recommended under cover in dry conditions.

FURTHER INFORMATION

- ICC-ES Evaluation Report ESR-4831 (www.icc-es.org)

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