

# Kerto® LVL

## S-beam MasterPlank

A Revolution  
in scaffolding



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Kerto LVL S-beam MasterPlank is an engineered wood product which is designed specifically for use as a scaffold plank. The unique process by which it is manufactured disperses the inherent defects found in solid sawn timber. Natural characteristics such as knots are randomized to maximize strength and minimize warping and splits. The product is compliant to the standard AS/NZS 1577:2018 and is stamped accordingly. S-beam MasterPlank has superior strength properties and is additionally proof-tested.

S-beam MasterPlank is made of 3 mm thick strength graded softwood veneers. Primarily used wood species is spruce (*Picea abies*) but product may contain small amounts of pine (*Pinus sylvestris*). The grain direction of all the veneers is the same. The veneers are bonded with weather- and boil-resistant phenol formaldehyde adhesive. Edges of the scaffold planks are eased and ends of the planks are sealed with color paint.

### Major advantages

- Strong and rigid
- Excellent strength-to-weight ratio
- Long spans with minimal deflection
- Dimensional stability improved against warp and twist
- Made of sustainable northern wood and PEFC certified (PEFC/02-31-03)
- Kerto LVL (1 m<sup>3</sup>) contains on average stored carbon equivalent to 783 kg CO<sub>2</sub> eq
- Individually proof-tested
- Meets the requirements of standard AS/NZS 1577:2018
- No metal end-banding required
- Perfect for petrochemical and gas industry applications
- Excellent anti-corrosive and chemical resistance properties
- Ideal for use where layouts inhibit modular systems
- Can be cross-cut to exact lengths

### Scaffold span & load tables

	PLANK THICKNESS (mm)	MAX SPAN LIMIT CALCULATED (mm) <sup>1</sup>	WLL (kN)	BAY WIDTH (mm)	PLANK WIDTH (mm) <sup>3</sup>
<b>Heavy Duty</b>	39	1600	2.475	900	230
<b>Medium Duty</b> <sup>2</sup>	39	1900	2.2	675	230
<b>Light Duty</b> <sup>2</sup>	39	2100	1.65	450	230

<sup>1</sup> span limit calculated by client based on theoretical deflection limit of span/100

<sup>2</sup> all test result values for this duty cycle are derived from the Heavy Duty results of each thickness

<sup>3</sup> results are based on a 225mm wide plank, although max spans are valid for widths up to and including 245mm

### Size

THICKNESS	WIDTH	LENGTH	WEIGHT (kg/m)
39 mm	230 mm	2000-6000 mm	4.6 <sup>1</sup>

<sup>1</sup> Average density 510 kg/m<sup>3</sup>

### Tolerances of Kerto products

DIMENSION	SIZE	TOLERANCE
Thickness	39 mm	± 2 mm
Width/height	230 mm	± 2 mm
Length	All	± 5.0 mm

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### Approvals and environmental credentials

Kerto LVL S-beam MasterPlank production is managed according to the principles of standard ISO 9001. The quality and the constancy of performance of the product is controlled by regular third party inspections and audits.

S-beam MasterPlank is a strong and reliable scaffold plank which has a certificate granted by University of Technology, Sydney (UTS). But, like all materials subject to the wear-and-tear of regular use, they must be properly maintained.

All the used wood is traceable and comes from certified or controlled forests. Metsä Group's wood tracing systems are certified and verified according to PEFC (PEFC/02-31-03) Chain of Custody requirements. Metsä Group ensures responsible forest management through forest certification processes.

Metsä Wood fulfils the obligations of the Australian Illegal Logging Prohibition Act, which all prohibit the placing and trading of illegally harvested timber and timber products on the market. As all the wood is covered by Chain of Custody certification, Metsä Wood knows the origin of the wood.

### Transport, handling and storage

S-beam MasterPlank should be stored flat and above ground in dry and well-ventilated conditions. The base under the product stack should be level and durable with adequate support.

If S-beam MasterPlank does suffer any form of misuse, it should be inspected before next use. Please note that fractures and other internal damage may not be visible. If there is doubt of structural performance proof testing is recommended.

#### For more information

[Kerto LVL Manual Transport, handling and storage](#)

### Regular inspection

Each scaffolding plank shall be inspected on a regular basis. Inspection gives a chance to remove and discard planks that are reaching the end of their safe working lives.

### Biological durability and chemical resistance

In normal use, scaffold planks usually don't stay wet or damp long enough to suffer fungal decay. Problems may arise when planks remain wet or damp for a period measurable in months. This can be avoided by storing products properly.

S-beam MasterPlank is resistant to many weak acids and acid saline solutions. Alkaline solutions soften the wood and cause it to swell. S-beam MasterPlank has good resistance to fuel and oil. They only cause some discoloration.

#### For more information

[Kerto LVL Manual Biological and chemical durability](#)

### Instructions

- Do not exceed maximum safe plank load
- Do not exceed maximum safe plank span
- Do not drop your planks
- Do not drop heavy materials on your planks
- Do not spill strong or corrosive chemicals on your planks
- Do not jump on your planks
- Do not use for any purpose other than as scaffold planks
- Do not allow oxyacetylene cutting or welding to cause burns to your planks
- Do not drive over your planks

## Typical degradation effects and guidelines for continued use

CONDITION	APPEARANCE	POSSIBLE CAUSE/EFFECT	NECESSARY ACTION
MOULD	On surface.	Indicates onset of fungal attack which may have become sufficiently established to result in loss of strength.	Do not use planks. Await validation for continued use. Wash mould off and then allow to dry, examine for soft patches or other evidence of decay. If there is no decay, proof test and return validated planks for service.
BURNS	In aggregate, more than 75mm across the width of the plank and less than 1mm maximum depth.	Welding slag or torch burns causing loss of section and loss of strength.	Proof test plank to validate for continued use.
	In aggregate, more than 75mm across the width of the plank and more than one veneer thickness or (3mm) maximum depth.	Welding slag or torch burns causing loss of section and loss of strength.	Either remove defect by cutting off affected portion or discard plank.
SAW CUTS	In aggregate, more than 75mm across width of the plank and more than 1mm deep. Edge cuts more than 10mm deep.	Notches, such as saw cuts, can result in a disproportionate loss of strength.	Discard plank or cut off affected area.
NOTCHES OR HOLES	Any notches or holes other than nail holes.	Holes or notches made in planks to permit penetrations, bolting etc. may result in excessive loss of strength.	Discard plank or cut off affected area.
DISCOLOURED PATCHES	Not identified as due to paint/ stain, cement, oil or other common substances with moderate pH.	Fungal decay or chemical degradation leading to softening of wood and loss of strength.	Discard plank or cut off affected area. Otherwise, proof test to validate continued use.
	Oil, grease, paint or other substance on surface with potential to increase slipperiness.	Slip hazard.	Withdraw planks from service. Gently scrape material and/or wash from surface with detergent. Clean planks may be returned to service.
GENERAL DISCOLOURATION	Plank surface grey in colour, possibly accompanied by fine checks (splits) in surface veneers. No evidence of defibration or softening of the surface.	Normal bleaching by the sun. Surface checking is also normal and not critical early effect of weathering.	No action required.
	Dark grey or bleached, accompanied by softening of the wood surface and defibration – ridges of harder wood, parallel to the grain may be left and soft wood readily removed if scratched or rubbed.	Chemical degradation or advanced weathering leading to loss of strength.	Discard planks exhibiting defibration or softening of the wood fibre on the surface. For planks subjected to strong acids and alkalis, proof testing at intervals related to time, usage cycles and exposure is recommended.



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CONDITION	APPEARANCE	POSSIBLE CAUSE/EFFECT	NECESSARY ACTION
SPLITS	Discontinuous surface splits, usually not extending deeper than the 3rd layer of veneer.	The result of weathering effects of constant wetting and drying. Called 'checks'.	No action required. Checking of this type is normal and has little effect on structural capacity.
	End splits, extending through the full thickness, but not more than 300mm in length.	Result from moisture differentials near the end of planks and the moisture-induced shrink and swell characteristics.	No action required. Where splits exceed 300mm, cut off and paint seal end of plank to limit the ingress of moisture.
SPLITS IN EDGES	Splits in edges between plies. Individually more than 150mm long and allowing insertion of a knife blade to a depth of more than 10mm.	Possibly a manufacturing defect. Bond defects are usually apparent after first exposure to moisture. (Not to be confused with numerous small checks associated with weathering) – unlikely to be critical unless extensive.	Remove plank from service and seek advice from manufacturer.
LIFTING VENEER	Veneer lifting from surface, bubbles etc. or veneer separation at face scarf joint.	Defective manufacture, usually evident very early in the life of the plank. Poorly made scarf joints may be critical.	Remove plank from service and seek advice from manufacturer.
	Any observation suggesting planks have been used as 'duck boards', sole plates, formwork, or for any other purpose other than as scaffold planks.	Damaged plank – damage may not be immediately obvious but plank may break suddenly under normal load in future.	Discard plank. Tag, paint or otherwise clearly and permanently distinguish as not suitable for scaffolding purposes.
	Any plank seen to be subjected to unusually severe loading – impact loading from falling objects excessively loaded (more than 210 kg) with stacked materials, subjected to vehicular traffic etc.	Weakened plank – weakening may not be immediately obvious but plank may break under normal load in future.	Remove immediately. Discard and tag, paint or otherwise clearly and permanently distinguish as not suitable for scaffolding purposes.
CORNER DAMAGE AT ENDS	Part of the width of the plank near the end or ends (more than 15% of the width) has been broken away reducing the width of bearing at the end support.	Usually the result of dropping. The loss of the width may result in the plank rolling at the affected support.	Cut off affected end and paint seal to reduce moisture ingress.
	Corner or other part of cross-section area exceeding 400mm <sup>2</sup> broken away.	The result of damage. Will reduce strength depending upon the loss of cross-section.	Cut off affected portion or reject for continued use as a scaffold plank.

## Kerto LVL S-beam MasterPlank identification



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**METSÄ WOOD**  
P.O. Box 50, 02020 Metsä, Finland  
Tel. +358 1046 05  
[metsagroup.com/metsawood](https://metsagroup.com/metsawood)

