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futurebuild®  
range

FUTUREBUILD®  
STRUCTURAL LVL  
hy ONE®

FUTUREBUILD®  
STRUCTURAL LVL  
hy SPAN®

FUTUREBUILD®  
LVL TRUSS CHORDS  
hy CHORD®

FUTUREBUILD®  
STRUCTURAL LVL  
BEAMS  
hy 90°

FUTUREBUILD®  
LVL ENGINEERED  
P-JOISTS  
hy JOIST®

FUTUREBUILD®  
LVL SCAFFOLD  
PLANKS  
hy PLANK®

FUTUREBUILD®  
LVL FORMWORK  
BEAMS  
tru FORM®

FUTUREBUILD®  
LVL FORMWORK  
EDGE BOARDS  
edge FORM®

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hy  
PLANK®

NEW ZEALAND EDITION

AUGUST 2018



Information contained within this manual is specific to the hyPLANK® range of LVL products and cannot be used with any other LVL products no matter how similar they may appear.

FUTUREBUILD®

# hy PLANK®

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## 1.0 hyPLANK® – A PROVEN PERFORMER

Since first being introduced to Australasian scaffolding more than two decades ago, hyPLANK® has established a reputation for safe and reliable performance. Made from Laminated Veneer Lumber (LVL), hyPLANK has recently been tested and certified for continued use in accordance with changes to AS/NZS 1576.1:2010 Scaffolding – Part 1: General Requirement and AS/NZS 1577:2013 Scaffold Decking Components.

### 1.1 FEATURES & BENEFITS

- Made from LVL – uniform, reliable and consistent performance.
- Individually proof tested to exceed the Working Load Limit defined in AS/NZS 1577:2013.
- Manufactured in accordance with AS/NZS 4357 Structural Laminated Veneer Lumber.
- Light weight and versatile.
- Tough and long lasting, especially in corrosive environments.
- Wax emulsion end seal reduces moisture ingress.
- Subject to stringent quality control – EWPA certified.
- Available Forest Stewardship Council® (FSC®) certified (FSC® C007103) upon request.
- Available untreated.

### 1.2 hyPLANK® TECHNICAL DATA & SPAN TABLES

hyPLANK has been designed to be used as a non-modular scaffold plank as a part of a working platform in accordance with the requirements of AS/NZS 1576.1 and AS/NZS 1577. Manufactured to AS/NZS 4357, Structural Laminated Veneer Lumber, hyPLANK has been characterised in accordance with Section 4 of AS/NZS 4063.2, Characterisation of Structural Timber, and designed to meet the structural performance requirements of AS 1720.1, Timber Structures Standard.

**Table 1: Technical Data for hyPLANK®**

| Duty Category | Size (mm) | Minimum Bay Dimension <sup>1</sup> (mm) | WLL UDL <sup>2</sup> |     | Approx Weight <sup>3</sup> (kg/m) | Maximum Span <sup>4</sup> (m) |
|---------------|-----------|---|----------------------|-----|-----------------------------------|-------------------------------|
|               |           |   | kN                   | kg  |                                   |                               |
| Heavy Duty    | 230 x 42  | 675                                     | 3.3                  | 345 | 5.6                               | 1.4                           |
| Medium Duty   | 230 x 42  | 675                                     | 2.2                  | 230 | 5.6                               | 2.0                           |
| Light Duty    | 230 x 42  | 450 <sup>5</sup>                        | 1.7                  | 173 | 5.6                               | 2.4                           |

1. As defined in AS/NZS 1576.1 Clause 3.7.2 for use in New Zealand.

2. Calculated in accordance with AS/NZS 1577 Clause 2.3.

3. At Equilibrium Moisture Content (EMC) <= 15%.

4. Unsupported overhangs to the requirements of AS/NZS 1576.6:2000 Clause 3.8.

5. Minimum bay dimension to suit Australian use.

### 1.3 AVAILABILITY

230 x 42mm hyPLANK® product range includes 3.0, 3.6 and 4.2m lengths, untreated. Other sizes, lengths and treatment options are available subject to lead times.

### 1.4 QUALITY CONTROL & PRODUCT CERTIFICATION

hyPLANK is manufactured in a quality controlled process as required by AS/NZS 4357:2005 and certified as compliant with AS/NZS 1577:2013 through the Engineered Wood Products Association of Australasia (EWPPA) Scaffold Plank Product Certification Scheme. Compliance with process based quality control requirements is third party audited by the EWPPA. The audits, together with the end product testing and market

inspection, are used as the basis for product certification by the EWPPA as a JAS-ANZ accredited product certification body. JAS-ANZ stands for the government established "Joint Accreditation System of Australia and New Zealand" which exists as the peak organisation for accreditation of product certification bodies.



## 2.0 CARE, STORAGE & MAINTENANCE

At the time of dispatch hyPLANK® is suitable for use as a scaffold plank based upon meeting the performance requirements of AS 1577:2013. To ensure that hyPLANK continues to perform safely, care in use and storage is essential.

Maintenance, entailing regular inspection and proof testing is necessary to ensure that planks reaching the end of their service life, and no longer safe for use, are detected and removed from service.

The following recommendations for care in use, storage and maintenance are provided to assist users to maximise service life whilst maintaining required levels of safety. These care, storage, and maintenance recommendations are to be used as a guide only and are not intended to replace basic safety, storage, and maintenance practices.

### Avoid Damage

hyPLANK may be damaged and rendered unsafe by misuse. Based on examples of misuse that have been commonly observed, we recommend the following:

- Do not use planks over spans and/or working load limit (WLL) greater than those recommended in Table 1.
- Do not drop hyPLANK from excessive heights.
- Do not drop heavy materials onto hyPLANK.
- Do not allow vehicles to drive over hyPLANK e.g. do not use as crossover boards or duckboards for vehicles.
- Do not use hyPLANK as a saw bench – even shallow saw cuts reduce strength.
- Take precautions against slag burns from oxy cutting or welding.

hyPLANK that has been subjected to these or any other types of misuse may be damaged and should be tested to verify they remain fit for purpose. Note that fractures resulting from overload may not be readily apparent by inspection – proof testing may be the only means of detection.

### Chemical Effects

hyPLANK will be largely unaffected by exposure to moderate strength acids or alkalis (pH range 2 - 10). Strong acids and alkalis will however attack the naturally occurring lignin which binds wood fibre and, in time, may cause a reduction in strength. For planks used in these environments regular proof testing is recommended.

### Decay

Scaffold planks in service that are installed on scaffolding and subject to the normal wetting and drying from weather, do not usually remain wet for protracted periods, and in these circumstances decay is unlikely.

Typically where planks have decayed, the decay has resulted from wet planks being stored away closely stacked with little or no ventilation. Any circumstance in which planks remain constantly wet is likely to result in fungal decay.

Planks that show any evidence of fungal decay (such as mould on the surface etc.) should be dried and tested for verification of strength before use.

The following recommendations for storage are made to reduce the likelihood of reduced service life due to decay.

### Recommendations for Storage

#### Wet planks

- Stack on level bearers well clear of the ground, with stickers (spacers between each layer).
- Located stack in a dry, well ventilated location and vertically align stickers with bearers.
- Bearers should be spaced appropriately, so that the maximum design span and overhang are not exceeded.
- A minimum of 3 bearers at the base of the stack, and 3 stickers per layer is recommended.
- The stickers are to be sufficient thickness to allow circulation of air between planks.

#### Dry planks

- Store under cover – no special requirement.
- Store outside – stack as for wet planks. Cover to keep dry.

### Maintenance

Regular inspection and strength testing is recommended. The frequency of testing depends upon the nature of use. Any plank subject to trauma or showing any obvious signs of misuse should be withdrawn from use pending verification of strength by proof testing.

### Proof Testing

AS/NZS 1577:2013, Appendix B provides a protocol for strength testing of scaffold planks. Whilst the Standard defines the minimum strength requirements the procedures given in Appendix B are not suitable for verifying the strength of individual planks, which should be done via a proof test.

A simplified proof test method has been designed to verify the strength of individual hyPLANK's against the minimum strength requirements defined in AS/NZS 1577:2013. Details of the test equipment and test method are available either by calling the technical enquiries number at the end of this brochure or from your hyPLANK supplier.

## 3.0 hyPLANK® SPECIFICATION

hyPLANK® is structural Laminated Veneer Lumber (LVL) manufactured in accordance with AS/NZS 4357:2005, Structural laminated veneer lumber and Product Certified by the EWPAA as compliant to the performance requirements for scaffold planks specified in AS/NZS 1577:2013, Scaffold decking components.

**Table 2: hyPLANK® Specification**

| <b>Veneer Properties</b>                                       |  |
|--|--|
| Thickness  | 3.5mm (Nominal)                          |
| Species  | Radiata Pine                             |
| Joints Face  | Scarf                                    |
| Joints Face  | Lap/Scarf                                |
| <b>Moisture</b>  |  |
| Moisture Content <sup>1</sup>                                  | 8-15%                                    |
| <b>Nominal Dimensional Tolerances</b>                          |  |
| Depth  | -0mm, +5mm                               |
| Thickness  | -0mm, +4mm                               |
| <b>Density</b>   |  |
| Density (Mean) <sup>1</sup>                                    | 580kg/m <sup>3</sup> (approximately)     |
| <b>Adhesive &amp; Bond</b>                                     |  |
| Refer AS/NZS 2098 and AS 2754                                  | Phenolic adhesive Type "A" (marine) bond |
| <b>Finish</b>  |  |
| Unsanded faces, sawn edges, and arrises removed by chamfering. |  |

1. At time of leaving mill.

### 3.1 SCAFFOLD PLANK MARKING

Each hyPLANK is permanently indent branded along the edge with the following information:

- hyPLANK – for identification.
- AS/NZS 1577:2013 – indicating compliance with the performance requirements.
- Max Span = 1.4m – Maximum span in metres for Heavy Duty working load limit.
- WLL = 345kg UDL – Working Load Limit in kg corresponding to Heavy Duty Action.
- Month/Year – Month and year corresponding to date of original plank proof testing.
- AS/NZS 4357.0 - indicating compliance with the manufacturing standard.
- EWPAA – Indicating Product Certification to the Engineered Wood Products Association of Australasia (EWPAA).
- JAS-ANZ – indicating EWPAA's accreditation as a JAS-ANZ product certification body for AS/NZS 4357.
- Mill No 918 – Futurebuild® Mill No registration with the EWPAA.
- Made by CHH – indicating manufacture by Futurebuild.

### 3.2 TECHNICAL SUPPORT 0800 808 131

For quick, clear product answers, our technical support phone line 0800 808 131 links you to our expanded, engineering support team. Our experienced support team can assist with enquiries ranging from sizing and design to installation advice. It's fast, easy and it's free.

## 4.0 hyPLANK GUIDELINES FOR INSPECTION & MAINTENANCE

hyPLANK scaffold planks are only intended for use as scaffold planks, i.e. for the support of persons, equipment, and materials on scaffold constructed and loaded in accordance with AS1576 and AS1577.

Use for any other purpose voids continued use as a scaffold plank. hyPLANK used for any other purpose (or subject to trauma) should:

- Have edge labelling on both sides planed off.
- Be indelibly and permanently marked by painting or stencilling as no longer suitable for use as a scaffold plank.
- Other structural laminated veneer lumber products are available for general construction use. Please contact Futurebuild or the technical enquiry numbers included in this brochure for more details.



**Table 3: hyPLANK® - Typical Degrade Effects and Guidelines for Continued Use**

|                               | <b>Observation</b>  | <b>Possible Cause/Effect</b>  | <b>Action</b>  |
|-------------------------------|---|---|--|
| <b>Mould</b>                  | On surface.   | Indicates onset of fungal attack which may or may not have become sufficiently established to result in loss of strength.   | Do not use plank pending validation for continued use. Wash mould off and then allow plank to dry, examine for soft patches or other evidence of decay (see Discoloured patches). If no decay, proof test and return validated planks for service. |
| <b>Burns</b>                  | In aggregate, more than 75mm across the width of the plank and <b>less than 1mm maximum depth.</b>  | 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 <b>more than one veneer thickness (or 3mm) maximum depth.</b>  | As above.   | Either remove defect by docking affected portion or discard plank.   |
| <b>Saw Cuts</b>               | 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 dock affected portion.  |
| <b>Notches or Holes</b>       | Any notches or holes other than nail holes.   | Holes or notches made in planks to permit penetrations, bolting etc. and may result in excessive loss of strength.  | Discard plank or dock affected portion.  |
| <b>Discoloured Patches</b>    | <b>Not identified as due to paint/stain, cement, oil</b> or other common substances with moderate pH.   | Could be fungal decay or chemical degradation leading to softening of wood and loss of strength.  | Affected zone exhibits softer wood than surrounding areas - discard plank or dock. Otherwise, proof test to validate continued use.  |
|                               | <b>Oil, grease, paint or other substance</b> on surface with potential to increase slipperiness.  | Slip hazard.  | Withdraw plank from service. Gently scrape material and/or wash from surface with detergent. Clean plank may be returned to service.   |
| <b>General Discolouration</b> | Plank surface <b>grey</b> in colour, likely to be accompanied by fine splits (checks) in surface veneers. No evidence of defibration or softening of the surface.   | Normal bleaching by the sun. Surface checking is also a normal and not critical early effect of weathering (see splits).  | No action required.  |
|                               | <b>Dark grey</b> 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 by scratching or rubbing.     | 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.                       |
| <b>Splits</b>                 | <b>Surface splits or checking</b> , discontinuous and usually not extending deeper than the 3rd layer of veneer.  | Result from the weathering effects of constant wetting and drying.  | No action required. 'Checking' of this type is normal and has little effect on structural capacity.  |
|                               | <b>End splits</b> , 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, dock and paint seal end of plank to limit the ingress of moisture.  |
| <b>Splits in Edges</b>        | 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 usually apparent after first exposure to moisture. (Not to be confused with numerous small splits associated with weathering) - unless extensive unlikely to be critical. | Remove plank from service and invite inspection by manufacturer.   |
| <b>Lifting Veneer</b>         | Veneer lifting from surface, bubbles or more particularly 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 invite inspection by manufacturer.   |
| <b>Corner Damage at End/s</b> | Part of the width of the plank near the end/s (more than 15% of width) has been broken away reducing the width of bearing at the end support.   | Usually the result of dropping and the loss of width may result in the plank rolling at the affected support.   | Dock affected end and paint seal to reduce moisture ingress.   |
| <b>Loss of Section</b>        | Corner or other part of cross-section area exceeding 400mm <sup>2</sup> broken away.  | Result of damage and depending upon the loss of cross-section will reduce strength.   | Either reject for continued use as a scaffold plank or dock affected portion.  |
| <b>Inappropriate Use</b>      | Any observation suggesting plank has been used as duck board, sole plate, formwork, or for any other purpose other than as a scaffold plank.  | Plank may be damaged - damage need not be readily apparent but previously damaged plank may break suddenly under normal loading.  | Discard for further use as scaffold plank - tag, paint or otherwise clearly and permanently distinguish affected planks as not to be used for scaffolding purposes.  |
| <b>Severe Loading</b>         | Any plank that has been observed as subjected to unusually severe loading - impact loading from falling objects, excessively loaded (more than 210kg) with stacked materials, subjected to vehicular traffic etc. | Plank may have been damaged - weakening may not be immediately obvious but plank may break under normal loading on some future occasion.  | Immediately remove from scaffolding, discard, tag, paint or otherwise clearly and permanently distinguish affected planks as not to be used for scaffolding purposes.  |

**NOTES:**

1. Proof test load should exceed the Maximum Working Load noted in Table 1 and plank should be tested with critical defect as near as possible to the load point but on the opposite face to the load application. For planks longer than their maximum span and where there is no clearly defined suspect weak point, testing with planks in a number of positions and orientation is suggested.

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