



INFORMATION SHEET

IS YOUR LVL COMPLIANT?

Laminated veneer lumber (LVL) is a material used in long-term structural applications. Some of these structural applications are critical where failure of the LVL could result in structural collapse of a structure, accident or even death. There have been fatalities on Australian worksites due to the structural failure of non-compliant engineered wood products.

When you purchase and use structural LVL (Laminated Veneered Lumber) in residential and commercial construction, it needs to comply with a number of regulations, codes of practice and standards, to be “fit for purpose” and comply with the National Construction Code and state building regulations.

These regulations, codes of practice and standards can include:

- AS/NZS 4357.0- The Australian Product Standard for Structural LVL,
- AS 1720.1-The Australian Timber Engineering Standard.
- AS 1684- The Australian Standard for timber framed construction
- AS/NZS 1604.1 where the LVL is preservative treated against termites and or fungal attack.

In addition, there are a number of Australian Standards that must be applied when testing and assessing structural properties and adhesive durability.

These include:

- AS/NZS 2098.2- Bond quality and durability
- AS/NZS 4357.2- Test methods for structural properties
- AS/NZS 4063- Determination of characteristic structural properties.

Together and in aggregate the Standards above ensure a safe and reliable structural material that is fit for purpose in residential and commercial construction. You can see that there are technically sound and robust processes to ensure compliance and to deliver safe and reliable structural LVL.

LVL that is produced in Australia or overseas are subjected to the same regulations.

AS/NZS 4357 has mandatory requirements for the branding (stamping) products that are manufactured to AS/NZS 4357 and have been assessed using AS/NZS 2098.2, AS/NZS 4357.2 and AS/NZS 4063.2. These products are branded (stamped) with a series of information so that you can be assured that it complies with Australian Standards and can be used safely in building

You need to be aware that just because LVL carries a stamp or identifying information that says it meets a particular Australian standard does not mean that it is compliant. In the case of LVL, conformity assessment is costly and it adds costs to build quality into a product to ensure that it is safe and reliable and fit for purpose in Australian construction. Responsible manufacturers and importers are able to provide additional information which verifies compliance to Australian Standards and supports the information carried on brands.





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LVL BRANDING

AS/NZS 4357.0 requires each board MUST have



Brand or company name

The manufacturer's company name or brand name OR the company name or brand name of the Australian based importer or manufacturer



The standard that it is complying with

For LVL that is AS/NZS4357.0:2022



Glue Bond Quality and Formaldehyde emission

Each board must show the Glue Bond Quality which for LVL is A Bond and must show the formaldehyde Emission which is E0



Structural Grade marking

Each board must show the Structural Grade.

This can be an E Value - modulus of elasticity (MOE) stiffness (E10, E13, E14 etc or F Value-Stress grade or load bending strength as defined in AS1720 (F11, F14, F17)

Some may show both such as E14/F17 this means that you can use the AS span tables in the case of F17 or specific company design software in the case of E14. All LVL is uniquely different and not always interchangeable, so you must use the design software or app provided by the specific manufacturer or supplier to determine the suitability/spans.

However, there can be claims of say E10 having equivalent or superior characteristic properties of solid timber MGP10, and can therefore be a direct substitute. The LVL however CANNOT be stamped MGP10 as it is not Mechanically Graded Pine



Preservative Treated, Glueline, Veneer or Envelope Treatment

Each stick must show the treatment plant number (which is registered with the TPAA) is a 3 digit number and can be checked at <https://tpaa.com.au/preservation-plants/>

It will also have a 2 digit number to identify type of treatment and in addition a 2 or 3 digit hazard designation (H2 or H2S for insect attack south of the tropic of Capricorn) or (H3 for insect and fungal attack for use in exterior above ground applications)



ADDITIONAL OPTIONAL INFORMATION THAT MAY BE Included in the BRANDING

THIRD PARTY CERTIFICATION CLAIMS



This shows that an independent certification body (auditing company) has verified that the manufacturer has the necessary quality systems and has undertaken all required conformity assessment testing to claim compliance to Australian Standards and the structural grade claims are supported by test data. The certification body completes ongoing audits to ensure the manufacturer meets all the requirements of the standard. This usually shows the Auditors company name and a number which can be checked on the auditor's website to verify the claim is still valid.

PRODUCT DATES & OTHER MARLKS

Some produces have batch numbers, dates and even QR codes that you can use to verify species and other information.

Country of Origin, this is not mandatory but can be added to show where the LVL was produced (The Country of origin and the country of harvest for the tress are not always the same)



Weather Shield coating, some products have coatings that shield the LVL from moisture uptake and usually are coloured, the colour is company specific and there is no direct correlation between colour and any other claim.

Strength Group, this is listed as JD4, JD5, JD6 which refers to nail holding of the timber species used in the LVL. This is important where LVL is used with nail plates in trusses, bracing or tie downs. JD6 is the lowest joint classification and usually relates to lower density softwoods.

CONCLUSION

It is too late once the building is up and there is a failure or query from the building inspector or surveyor to try and find out if the LVL you have used is compliant.

Not all LVL is the same and like all manufactured products you need to know what you are buying and who you are buying from and what backup you can expect if an issue arises.

ATIF members ensure that the products that they sell are sustainable, legally logged, fit for purpose, compliant and warrantied.

Listings of ATIF members can be found on <https://atif.asn.au/> those companies will be able provide you with a list of resellers who sell compliant LVL