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EWPAA Media Release

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Asian Plywood Suppliers Come Unstuck on Quality

THE game's up for Asian building materials suppliers who attempt to enter the Australasian market with underlayment plywoods that fail to meet standards for stability, Lyctid susceptibility and accepted formaldehyde levels.

They have been caught out – and not for the first time – by vigilant wood products engineers who have put many samples of imported plywood under rigorous stability tests and found them at the best failing compliance to Australian standards and at the worst life threatening.

Random samples of plywood sheets obtained on the open market by the Engineered Wood Products Association of Australasia (EWPAA) were unlabelled for grade, bond type and formaldehyde emission class and there was no indication of the manufacturer or exact country of origin.

But the formaldehyde content of the samples is a much bigger issue and is linked to the condemning by the US Government of 35,000 trailers built as emergency housing after hurricanes Katrina and Rita hit the Gulf Coast in 2005.

Following the evacuation of 105,000 families affected by emissions from the extremely high levels of formaldehyde contained in the plywood used to build the trailers, the US Federal Emergency Management Agency is following strong leads that the material was sourced in China.

Core veneer species used in the manufacture of the underlayment plywood imported into Australia have been identified by the Queensland Department of Primary Industries and Fisheries as Populus spp, a low density hardwood frequently used by Chinese plywood manufacturers.

"The emergency shelter disaster in the US and the dangerously high content of formaldehyde in inferior standard plywood imported into Australia is very disturbing," EWPAA general manger Simon Dorries said.

"Test results on these products showed formaldehyde emissions were extremely high (4.8mg/ L). Of greater concern was the fact that the emission class was not labelled on the panel to identify it as a high emission product."

Australian plywood standards require labelling of formaldehyde emissions. Every plywood sheet complying with these standards must be labelled with the formaldehyde emission class.

"However, as no claims have been made by the importer or supplier of the plywood tested for compliance with Australian standards, the imported products tested have fallen outside of the labelling requirements of the Australian standard," Mr Dorries said.

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CERTIFIED QUALITY MANAGEMENT SYSTEM

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"This in itself is a serious issue; failure to identify this product as a high emitter will lead to the use of this product in applications where ventilation is poor and the floor area sufficiently large to cause formaldehyde to accumulate in the atmosphere to a potentially dangerous level."

Mr Dorries said the use use of this product without any form of labelling was extremely worrying. It was not "fit for use" and potentially unsafe in unventilated or poorly ventilated applications or where sensitive individuals may be exposed.
The EWPAA laboratory tests formaldehyde emissions from all certified products manufactured in the Australasian region.

The EWPAA for some time has receiving marketplace feedback about the poor performance of low-cost imported underlayment plywood and anecdotal evidence of a significant increase in flooring failures due to the quality of this underlayment.

Underlayment plywood is plywood used under high value strip flooring systems and is usually fixed to a concrete slab with the strip flooring nailed into the underlayment plywood. The underlayment plywood's primary role is to provide substrate into which nails can be fastened, but it also fulfils secondary roles in sound attenuation, to stablise the floor by providing a base which minimises hygroscopic movement and at times may be used as a structural element of the floor.

Product was purchased in the open market in northern New South Wales by an EWPAA representative who specifically requested a plywood product for use as underlayment for a strip floor. The product was represented by the merchant as "the stuff everyone uses for underlayment".

One sheet of the 15 mm imported product was purchased and forwarded to the EWPAA national testing laboratory for analysis. The sheet did not have any labelling to identify the grade, bond type, formaldehyde emission class, the manufacturer or country of origin.

The EWPAA laboratory tests formaldehyde emissions from all certified products manufactured in the Australasian region. All EWPAA-certified structural plywood and Type A bond exterior plywood have an emission class of E0 with a maximum emission of 0.50mg/L. In fact, the average formaldehyde emission for all structural and Type A exterior plywood products produced by EWPAA certified mills is only 0.26mg/L or half the permitted level and approximate to the natural formaldehyde emission from timber.

The measured emission from the imported underlayment plywood was 4.8mg/L or about 18 times the average emission from EWPAA-certified structural plywood.
To be "fit for use" as flooring underlayment, any plywood needs to meet certain criteria:

- Bonding quality as a minimum, it should be Type B as specified in AS/NZS 2754.1 Adhesives for Plywood.

- Thickness must be uniform across the panel to ensure a flat and smooth floor and mean panel thickness should meet strict limitations.

- There are currently no limitations for formaldehyde emissions under the Building Code of Australia, or any mandatory requirements for emission labelling on products. However, as the product is used in confined environments, formaldehyde emissions are a serious potential risk to home occupants should emissions be high.

- The product must be free from Lyctid susceptible sapwood veneer. This is not only required to ensure that the product is "fit for use" but is also required under Queensland and New South Wales state legislation. Lyctid susceptible sapwood can be treated against infestation by a recognised preservative.

- Note: Plywood complying with Australian standards AS/NZS 2269 – Structural Plywood or AS/NZS 2271 – Exterior Plywood automatically meets all the above criteria.

The imported samples of Poplar plywood have been identified by the Queensland DPI & F as having an AS 5604 – Timber Natural Durability Ratings as Lyctid susceptible. This requires all sapwood to be chemically treated to prevent infestations by Lyctid borers. In addition to species identification, the DPI & F also performed chemical analysis for the presence of approved insecticides used to treat against attack by Lyctid borers.

In addition to these tests, the EWPAA subjected the plywood to the standard test for the presence of sapwood defined in Appendix A of AS 1604.1 – Specification for Preservative Timber. This test confirmed the presence of sapwood at a number of locations in the sheet.

“The results of tests for Lyctid susceptibility have shown that the timber (Poplar) used in the core veneers is a susceptible species and the presence of sapwood has been confirmed,” Mr Dorries said.

Sale of the plywood tested and purchased in New South Wales by the EWPAA is illegal in that state as it does not comply with the NSW Timber Marketing Act.
“The use of untreated Lyctid susceptible plywood underlayment is absurd as the risks associated with Lyctid attack far outweigh the cost benefit ($2-3 per sq m) in using a low-cost imported substitute underlayment,” Mr Dorries said.

“Lyctid susceptible underlayment is quite simply not fit for use and it is highly irresponsible of the material supplier and flooring contractor to use such material.”

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