Steven C. Zylkowski
Director
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Ken Lau
Pete Schiffers
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Dear Ken and Pete:

You indicated that the question of potential formaldehyde emissions from your PS 2 OSB has arisen and you have asked for APA to provide information on this topic, addressing also the status with respect to formaldehyde regulations.

Ainsworth OSB uses phenolic and/or isocyanate adhesives that provide moisture resistant bonding and extremely low formaldehyde emission levels.

Following is a brief discussion of PS 2 OSB with respect to formaldehyde regulations and standards:

1) U.S. HUD Manufactured Housing Standard. This standard specifies a 0.20 ppm emission limit for plywood and a 0.30 ppm limit for particleboard using the ASTM E1333 method. The standard also requires ongoing monitoring of these panels. While there is no specific limit stated for OSB, it has been well accepted that the stated exemption for panels that use phenolic adhesives is applicable to PS 2 OSB. This exemption is based on data showing emissions levels that are significantly below the specified limits.

2) California Air Resources Board (CARB) Air Toxic Control Measure for Composite Wood Products. This regulation developed by a division of California's EPA has been approved by the state and will be implemented January 1, 2009. The regulation is available at www.arb.ca.gov/regact/2007/compwood07/att1.15day.pdf. Definition #8 explicitly exempts PS 2 OSB from the regulation. This exemption for OSB and other structural engineered wood products was based on the low emission levels of adhesives used in these products. This standard is considered the most stringent formaldehyde regulation in the U.S.

3) The Japanese Structural Panel standard that is applicable to OSB uses a desicator formaldehyde test to measure and rate products. Products that meet the most stringent level (F****) are required to have average emission levels below 0.30 mg/l. Ainsworth OSB is routinely evaluated to this standard and has averaged 0.07 mg/l, less than 1/4 of the permissible level. This formaldehyde regulation for wood panels is widely considered to be the most stringent in the world.

4) OSB sold into European markets must meet the EN 300 standard for OSB and be rated for formaldehyde emissions based on the EN-717-1 test using a formaldehyde test chamber. Results on Ainsworth OSB tested to this method were 0.01 mg/m^3, which is one-twelfth of the 0.124 mg/m^3 limit permitted in the European E1 formaldehyde rating. This is considered to be the most stringent formaldehyde standard in Europe.

Ainsworth OSB formaldehyde emissions are a fraction of the permissible levels in the most stringent regulations in the world. Ainsworth OSB is exempt from U.S. HUD and CARB regulations because of the low emission rate of the adhesives used in OSB.

This low formaldehyde emission rate of Ainsworth OSB makes it desirable for use in projects specified under Green Building Standards or in other applications that require products with advantageous environmental attributes.

Can OSB be claimed to be “formaldehyde-free” or “VOC-free”? *No*.

Living organisms, including humans, emit formaldehyde and other VOCs as part of normal respiration and biological functions. As such, woody material produced from trees also contains naturally occurring levels of formaldehyde and VOCs that can continue to be emitted at very low levels after processing into wood products. So raw wood, without adhesives or finishes added, will emit some level of formaldehyde or VOCs, however negligible it may be. Absent some defined criteria, it is inaccurate to make a “formaldehyde-free” or “VOC-free” claim to wood products.

The best measures of a wood panel’s formaldehyde credential are the applicable ratings or exemptions for the product. PS 2 OSB meets, or is exempt from, the most stringent rating standards that exist for wood panels.

Please let me know if you have any questions on this information.

Best regards,

Steve Zylkowski
Director
Quality Services Division