Joint Industry Statement on Deconstructive Testing

What is Deconstructive Testing?

The California Air Resource Board (CARB) defines ***deconstructive testing*** as:

'the process of separating or cutting the finished good into component parts so that pieces of the underlying panel may be accessed in order to remove the coating or laminate to achieve a test specimen that can be sent to a lab for formaldehyde emissions testing. This process includes removing coatings from hardwood plywood and removing laminates (synthetic or wood veneer) from laminated products to access the underlying composite wood products. For finished goods that consist of a laminated product in which one side is not laminated or coated, the product may be cut and tested as a panel with a surface coating on one side.'

How is Deconstructive Testing Done?

CARB developed and has posted on its website, a ***'Standard Operating Procedure for Finished Good Test Specimen Preparation Prior to Analysis of Formaldehyde Emissions from Composite Wood Products'*** (the SOP).

When Does CARB Use Deconstructive Testing?

In their Frequently Asked Questions, CARB states that the SOP is used as part of its enforcement evaluation as a tool '***to determine'*** if further investigation may be required. It is critical that CARB only use deconstructive testing as a potential ***'screening tool'*** and rely on the established chain of custody regulatory requirements to verify compliance.

Does CARB Require Deconstructive Testing?

No. The Airborne Toxic Control Measure (ATCM) does not require deconstructive testing by manufacturers, importers, fabricators or retailers on component parts of a finished good that are produced using certified composite wood platforms purchased from primary panel manufacturers certified by a registered Third Party Certifiers (TPC).

Deconstructive Testing is Controversial, Why?

The use of deconstructive testing is controversial and is a topic of frequent discussions between CARB and industry stakeholders.

- ***Deconstructive Testing is Unreliable*** - At question is the variability of test results when a finished laminated panel used as a component part of a finished good is deconstructed. The American Home Furnishings Alliance (AHFA) ***'Composite Panel Deconstruction Experiment'*** concluded that ***'deconstruction significantly alters the emissions characteristics of Composite Panel, regardless of whether the panel is finished or not.'***

- ***Deconstructive Testing is Prone to Inaccuracy*** - As demonstrated by AHFA and others, current testing of deconstructed laminated products is tedious and requires precision to achieve repeatable and reproducible results with a high degree of confidence. This inherent lack of accuracy could lead to measured emissions that exceed the established emission limits listed in the ATCM for raw composite wood products. The results are subjective and unenforceable.

- ***CARB Has Acknowledged the Variability of Deconstructive Testing*** - The variability embedded in the test method produces so much uncertainty in the emissions data that CARB has developed a significant 'range of variability' used to interpret test results. CARB has publically discussed the need for and use of this ***'uncertainty factor'*** for any data derived from using the SOP in an enforcement evaluation. Further, CARB has published and acknowledges variability in observed emission rates of deconstructed laminated panels that are in excess of the published emission limits of raw, regulated composite wood products (PB, HWPW and MDF). This is from their own internal development of the SOP – which has not gone through the regulatory process, been codified, adopted or approved by any national or international standards body such as ASTM or ANSI.

- ***CARB Has Not Independently Validated the Deconstructive Testing SOP*** - In addition to the issues of variability and uncertainty, CARB has not independently verified or validated the SOP test method by developing a robust 'Precision and Bias Statement' using prescribed ASTM standards or released any correlation data to aide in the interpretation of test results.

- ***The Deconstructive Testing SOP Doesn't Take Into Consideration All Products*** - Review of the published SOP suggests a lack of understanding about the products being tested leading to additional confusion about the emissions data obtained by using this test method.

- ***CARB Emission Limits Were Developed for Raw Panels*** - CARB's emission limits specified in the ATCM are based on tests of raw composite wood panels (particle board, MDF and Hardwood Plywood), not on deconstructed finished panels used as component parts of finished goods. There are no published standards or guidelines used by CARB to determine compliance for deconstructed composite wood panels and enforcement actions regarding regulated panels used as component parts of finished goods should not be based on a non-validated SOP test method, obvious uncertainty, and subjective interpretation. The SOP is published on the ARB website but it is not directly referenced or incorporated within the ATCM.

Is There a More Reliable Way to Test a Finished Product for Formaldehyde Emissions?

Yes. CARB has proposed an alternative regulatory approach that would establish an emission limit for finished laminated products with a well-established test method. The coalition supports this approach as a more effective and reliable method than deconstructive testing to demonstrate compliance. Promulgation of the proposed amendments to the ACTM, which establishes an emission limit for

laminated products, would eliminate the necessity for deconstructive testing and would resolve many of the issues manufacturers, importers, and retailers are currently experiencing in the market place.

How Should Deconstructive Testing Be Used Until CARB Updates the ATCM?

It is clear the SOP cannot be used to make enforcement determinations. The underlying issues are not resolvable. The SOP is at best a screening tool because of the dramatic variability of measured emissions from deconstructed samples of finished products. Specifically, results obtained from deconstructed samples should only be used to flag products for additional inquiry and investigation, not as a definitive determination of compliance with the prescriptive emission limits of the ATCM for composite wood products.

Therefore, promulgation of the proposed amendments to the ACTM, establishing an emission limit for laminated products, would resolve many of the issues manufacturers, importers, and retailers are currently experiencing in the market place and most importantly address consumer concerns.