



# **Formaldehyde Emission Standards for Composite Wood Products in US**

(CARB ATCM Phase 2 and EPA TSCA Title VI)

## Preface

High-pressure laminate (HPL) manufactured in accordance with EN 438 has been used in the construction and furniture sector for decades. The European standard EN 438 defines the material, requirements and properties of HPL.

HPL is a resin and paper-based (cellulose) thermosetting composite material and features a unique, extremely robust, resistant, modern decorative surface. HPL is found in all aspects of our day-to-day lives and can be self-supporting or used bonded to a substrate. The application and usage areas of HPL are extremely diverse and are constantly evolving. This requires regularly updated information about different applications and processing techniques. ICDLI technical bulletins are a valuable source for this knowledge.

The technical leaflet “CARB ATCM Phase 2 and EPA TSCA Title VI for Composite Wood Products” gives information for the emission standards CARB ATCM Phase 2 and EPA TSCA Title VI.

This document makes no claim of completeness regarding listing the full details of any standards referred to in the text. All information is based on the current state of technical knowledge, but it does not constitute any form of liability. It is the personal responsibility of the user of the products described in this information leaflet to comply with the appropriate laws and regulations.

For more than 50 years the ICDLI has been the international representative of the interests of European laminate manufacturers. Further information about the ICDLI and the data sheets published up to now can be found at [www.icdli.com](http://www.icdli.com). This application was compiled by the International Committee of the Decorative Laminates Industry. It considers the conditions of application technology in the European countries. If you have further questions, please contact us:

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## 1. General

High-pressure laminate (HPL) manufactured in accordance with EN 438 has been used in the construction and furniture sector for decades. The European standard EN 438 defines the material, requirements and properties of HPL.

HPL is a resin and paper-based (cellulose) thermosetting composite material and features a unique, extremely robust, resistant, modern decorative surface. HPL is found in all aspects of our day-to-day lives and can be self-supporting or used bonded to a substrate. The application and usage areas of HPL are extremely diverse and are constantly evolving. This requires regularly updated information about different applications and processing techniques. ICDLI technical bulletins are a valuable source for this knowledge.

## 2. Composite Wood Products

Composite wood products are panels or substrates manufactured from wood pieces, particles or fibers that are bonded together with adhesive or resins and are typically classified as:

- Particleboard
- Medium density fiberboard (MDF)
- Hardwood plywood

Typically, urea-formaldehyde adhesives and resins are used to manufacture composite wood products creating the potential for formaldehyde emissions. These composite wood products must comply with the emission requirements specified in the U.S. by California Air Resources Board (CARB) Airborne Toxic Control Measure (ACTM) Phase 2 (also known as CARB 2) or Environmental Protection Agency (EPA) Toxic Substances Control Act (TSCA) Title VI (also known as the Composite Wood Rule).

HPL consist of layers of cellulose fibrous material (such as decorative or saturating kraft paper) impregnated with thermosetting resins and consolidated by a high-pressure, high-temperature process. Since HPL is made from cellulose fibers rather than wood pieces,

### **Note:**

**HPL is specifically exempt from the requirements of either CARB ACTM Phase 2 or EPA TSCA Title VI.**

When HPL is combined with a composite wood panel, the finished part can achieve compliance by using a substrate which conforms to CARB ACTM Phase 2 and EPA TSCA Title VI.

### **3. Formaldehyde Emission Regulations in North America**

Indoor Air Quality plays an increasingly significant role in the built environment rising to the same importance as the quality of the buildings and the associated quality of the materials used.

The California Air Resources Board (CARB) established the Airborne Toxic Control Measure (ATCM) in order to promote improved indoor air quality through reduced formaldehyde emissions. CARB ATCM regulations apply only to products supplied for use in California. CARB regulations have evolved since they were first developed:

CARB ATCM Phase 1: Introduced in 2009

CARB ATCM Phase 2: Implemented in 2010

With the support and encouragement of U.S. industry CARB ATCM Phase 2 regulations were expanded to cover not only California but the entire United States. This expanded coverage was accomplished through the U.S. Environmental Protection Agency (EPA) by an extension of the existing regulation known as the Toxic Substances Control Act (TSCA). The nationwide formaldehyde emission regulations were published as the EPA Toxic Substances Control Act Title VI (also known as TSCA Title VI or the Composite Wood Rule.)

### **4. Formaldehyde Emission Certification System**

Both regulations, CARB ATCM Phase 2 and TSCA Title VI, have a number of requirements to demonstrate compliance with the regulation. The necessary process for implementation depends on the role in the certification system. However, CARB has agreed to accept a product which complies with TSCA Title VI as also complying with CARB ATCM Phase 2.

Regulated businesses (Operators) are:

- Panel producer
- Importer
- Fabricator
- Distributor
- Retailer

The highest requirements are set for "PANEL PRODUCER" who must:

- Conduct formaldehyde emission testing
- Conduct regular internal quality control testing
- Implement a Third-Party Certification System (TPC)

- Maintain traceability records (documentation for customers of substrate)
- Label products (CARB 2 for California, TSCA VI for U.S.)
- Permit CARB to inspect the facility (Audit; for supply in California)

Manufacturer of bonded boards (HPL composites, HPL worktops) are considered as “FABRICATOR”.

The obligations for a Fabricator of HPL composites and worktops with HPL surfaces are as follows:

- Insure products are fabricated using substrates which comply with CARB ACTM Phase 2 or EPA TSCA Title VI.
- Maintain records and traceability showing purchased substrates comply with CARB ACTM Phase 2 or TSCA Title VI
- Label products as complying with CARB ACTM Phase 2 or TSCA Title VI

Fabricators are NOT required to:

- Conduct formaldehyde emission testing
- Conduct internal quality control testing
- Implement a Third-Party Certification System (TPC)

#### **4.1 Labeling**

Panel producers, importers, distributors, fabricators or retailers must have a method sufficient to identify panels removed from bundles (e.g., copy of bundle tags) and provide information as to the source of panels upon the request of the customer.

Labels must be placed on each finished good made with regulated composite wood, or alternatively on a box or bundle, and include the following:

- Fabricator’s name, or if written consent obtained by downstream entity, the name of downstream fabricator, importer, distributor or retailer
- Date finished good was produced
- Statement that finished good is CARB ACTM Phase 2 or TSCA Title VI compliant

Labels may be applied as stamp, tag or sticker, but not as a barcode.

## 4.2 Recordkeeping

Importers, fabricators, distributors and retailers must maintain the following records for three (3) years and be able to make them available upon request within 30 days:

- Records identifying the panel manufacturer and date panels were manufactured
- Records identifying the supplier, if different, and date of purchase
- Bills of lading, invoices or comparable documents that include a written statement from supplier that the panels, components or finished goods are CARB ACTM Phase 2 / TSCA Title VI compliant or were produced with the timetable established by TSCA Title VI.

## 4.3 Non-Complying Lots

Fabricators that have received notification of a non-complying lot must notify purchasers of composite wood products containing wood from the non-complying lot within 72 hours of notification, and provide purchasers with:

- Panel producer name, contact info and date of notice
- Description of products affected
- Nature of failed test
- Statement that lot must be isolated and cannot be further distributed in commerce
- A description of the steps the panel producer intends to take to either recall the composite wood products belonging to the non-compliant lot or to treat and retest the products and re-certify the lot

## 4.4 Compliance Timetable

### Compliance Date Amendment

Following settlement of a lawsuit the U.S. District Court for the Northern District of California issued an order amending the compliance dates for the TSCA Title VI formaldehyde standards for composite wood products. The relevant compliance dates are as follows:

- As of June 1, 2018, and until March 22, 2019, composite wood products sold, supplied, offered for sale, manufactured, or imported in the United States were required to be labeled as CARB ATCM Phase II or TSCA Title VI compliant. After March 22, 2019, composite wood products must be labeled as TSCA Title VI compliant. These products include: hardwood plywood, medium-density fiberboard and particleboard, as well as household and other finished goods containing these products.

- Products that are certified by a CARB approved Third Party Certification (TPC) are also considered certified under TSCA Title VI until December 12, 2018.
- By June 1, 2018, regulated composite wood panels and finished products containing such composite wood panels that are manufactured (in the United States) or imported (into the United States) must be certified as compliant with either the TSCA Title VI or the California Air Resources Board (CARB) Airborne Toxic Control Measures (ATCM) Phase II emission standards, which are set at identical levels, by a third-party certifier (TPC) approved by CARB and recognized by EPA. Previously, these products were required to be TSCA Title VI compliant by December 12, 2018.
- Until March 22, 2019, regulated products certified as compliant with the CARB ATCM Phase II emission standards must be labeled as compliant with either the TSCA Title VI or the CARB ATCM Phase II emission standards. Regulated products manufactured in or imported into the United States after March 22, 2019 may not rely on the CARB reciprocity of 40 CFR 770.15(e) and must be certified and labeled as TSCA Title VI compliant by an EPA TSCA Title VI TPC with all of the required accreditations.
- After March 22, 2019, CARB-approved TPCs must comply with additional accreditation requirements in order to remain recognized as an EPA TSCA Title VI TPC and to continue certifying products as TSCA Title VI compliant.

The following dates from the September 25, 2017 compliance date extension final rule remain in effect:

- Import certification provisions to March 22, 2019; it was previously December 12, 2018.
- Laminated product producer (not HPL Composites Producer) provisions to March 22, 2024; it was previously December 12, 2023.
- Conclusion of the transition period for CARB TPCs to March 22, 2019; it was previously December 12, 2018.

## **5. Differences between CARB ACTM Phase 2 and EPA TSCA Title VI System**

The formaldehyde emission limits for composite wood products under the EPA TSCA Title VI are the same as CARB ACTM Phase 2 formaldehyde emission limits.

EPA worked to align the other requirements of the federal rule with the California requirements. However, there are a few differences:

- The EPA rule require records be kept for 3 years versus 2 years
- Require importers to provide import certification under TSCA two (2) years after rule finalization





- Require manufacturers to disclose upon request formaldehyde testing results to their direct purchasers
- Require laminated products (not HPL Composites) not exempted from the definition of hardwood plywood to meet the hardwood plywood formaldehyde emissions standard seven (7) years after the final rule is issued