

MONITOR **FORMALDEHYDE EMISSIONS** AND ENSURE YOUR COMPETITIVENESS IN THE US MARKET



REDUCE FORMALDEHYDE EMISSIONS FROM YOUR COMPOSITE WOOD PRODUCTS

Formaldehyde is produced on a large scale worldwide. One major use includes the production of wood binding adhesives and resins. Formaldehyde was designated as a toxic air contaminant (TAC) in California in 1992 with no safe level of exposure. The Air Resources Board (ARB) evaluated formaldehyde exposure in California and found that one of the major sources of exposure is from inhalation of formaldehyde emitted from composite wood products.

In 2008 the United States Environmental Protection Agency added formaldehyde to the list substances as part of the Toxic Substances Control Act (TSCA).

CARB AND THE NEW FORMALDEHYDE STANDARDS FOR COMPOSITE WOOD ACT

The Airborne Toxic Control Measure (ATCM) to control formaldehyde emissions from composite wood products drafted by California Air Resources Board (CARB) was approved in April 2008 by the Office of Administrative law. It is applicable to composite wood products and all finished goods sold, supplied, used, or manufactured for sale in California.

The federal formaldehyde emission standards for composite wood products under the EPA final rule are identical to the California 'Phase 2' formaldehyde emissions standards.

CARB/FEDERAL REGULATION SCOPE

WHO IS AFFECTED?

- Panel manufacturers
- Distributors, Importers, Fabricators, Retailers

WHAT MATERIALS AND PRODUCTS ARE AFFECTED?

- Composite wood products including hardwood plywood (HWPWs), particleboards (PBs), medium density fiberboards (MDFs) and thin medium density fiberboards (thickness ≤ 8 mm)
- Furniture and other finished products made of composite wood products, including consumer shelving, fixturing, DIY products, flooring, paneling, moulding, packaging and picture frames

EXEMPTIONS (MATERIALS & PRODUCTS)

- Structural plywood, as defined in voluntary product standard PS 1-07
- Hardboard, as defined in ANSI A135.4, 5 or 6
- Products subject to US Department of Housing and Urban Development (HUD) regulations
- Windows with <5% by volume of composite wood
- Garage and exterior doors; doors with <3% by volume composite wood or made from composite wood products manufactured with ultra-low-emitting formaldehyde (ULEF) or no-added formaldehyde (NAF) based resins
- Military specification plywood
- Composite wood products if used inside new vehicles (excluding recreational vehicles)

PHASE	EFFECTIVE DATE	HWPW-VC (ppm)	HWPW-CC (ppm)	PB (ppm)	MDF (ppm)	THIN MDF (ppm)
1	1st January 09	0.08		0.18	0.21	0.21
	1st July 09		0.08			
2	1st January 10	0.05				
	1st January 11			0.09	0.11	
	1st January 12					0.13
	1st July 12		0.05			

TOTAL COMPLIANCE SOLUTIONS FOR PROTECTING YOUR BRAND AND YOUR CUSTOMERS

HOW TO DEMONSTRATE COMPLIANCE TO FORMALDEHYDE EMISSION STANDARDS?

PANEL MANUFACTURERS

Third Party Certification

- Testing of materials and finished goods
- QC staff certification (blind/duplicate test) by Third Party Certifier (TPC)
- Correlation establishment with TPC
- Product type test at TPC
- Factory QA system assessment (audit)
- Record Keeping (all productions)
- Statement of compliance

To keep the certification current, quarterly audit is required per regulation, no matter what type of product is being produced or its stated emission level.

Material and product Labelling is required in addition to the chain of custody documentation. It includes manufacturer's name; product lot number or batch produced; a marking showing compliance with Phase 2 emission standards or the use of ULEF/NAF base resins; ARB assigned number of the TPC agency. All components should be labelled.

FABRICATORS, DISTRIBUTORS, IMPORTERS AND RETAILERS

- Purchase of complying composite wood products and finished products
- Record Keeping
- Materials and product Labelling
- Statement of Compliance
- Facility Inspections

Sell-through provisions are provided to move non-compliant inventory. They are different for composite wood products and finished goods (maximum up to 18 months after the applicable effective date of the emission standard).

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SGS SOLUTIONS

- Seminars and webinars
- Customized training on CARB certification
- Testing advice
- Factory audits
- Suppliers audits & voluntary fabricator certification scheme
- Certification services



SGS Hong Kong, Guangzhou, Shanghai and Taipei are CARB accredited third party certifiers. They operate both large and small testing chambers.

CONTACT US

For more information please contact your local SGS representative or contact our global team consumer.products@sgs.com and visit www.sgs.com/carb



TESTING METHODOLOGIES

Two testing methodologies recognized by CARB for the ATCM for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products:

ASTM E1333

Primary test method: Large Chamber (min.22m³) designed to fit a full standard sized (4'x8') plywood panel), 24 h-test, emission result in ppm.

ASTM D6007

Secondary test method: Small Chamber (max.1m³), test must be performed 3 times and results averaged.

(The small scale quality control test methods are approved by CARB for manufacturers' in-house quality control test, and correlation should be established with primary or secondary test methods).

