

**Introduction  
to CARB &  
EPA TSCA  
Title VI  
Certification**



**GICIA INDIA<sup>TM</sup>**  
PRIVATE LIMITED

# Scope of the Webinar

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1. Background

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2. History

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4. Purpose of Certification

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5. Formaldehyde Emission Standards

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6. Business Advantage

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**Background**

# Trends in Sustainable Development and Improving Health



The most dominant industry is in 201... substantial... growth rate

the most... this... net... 202...



Chemical product →

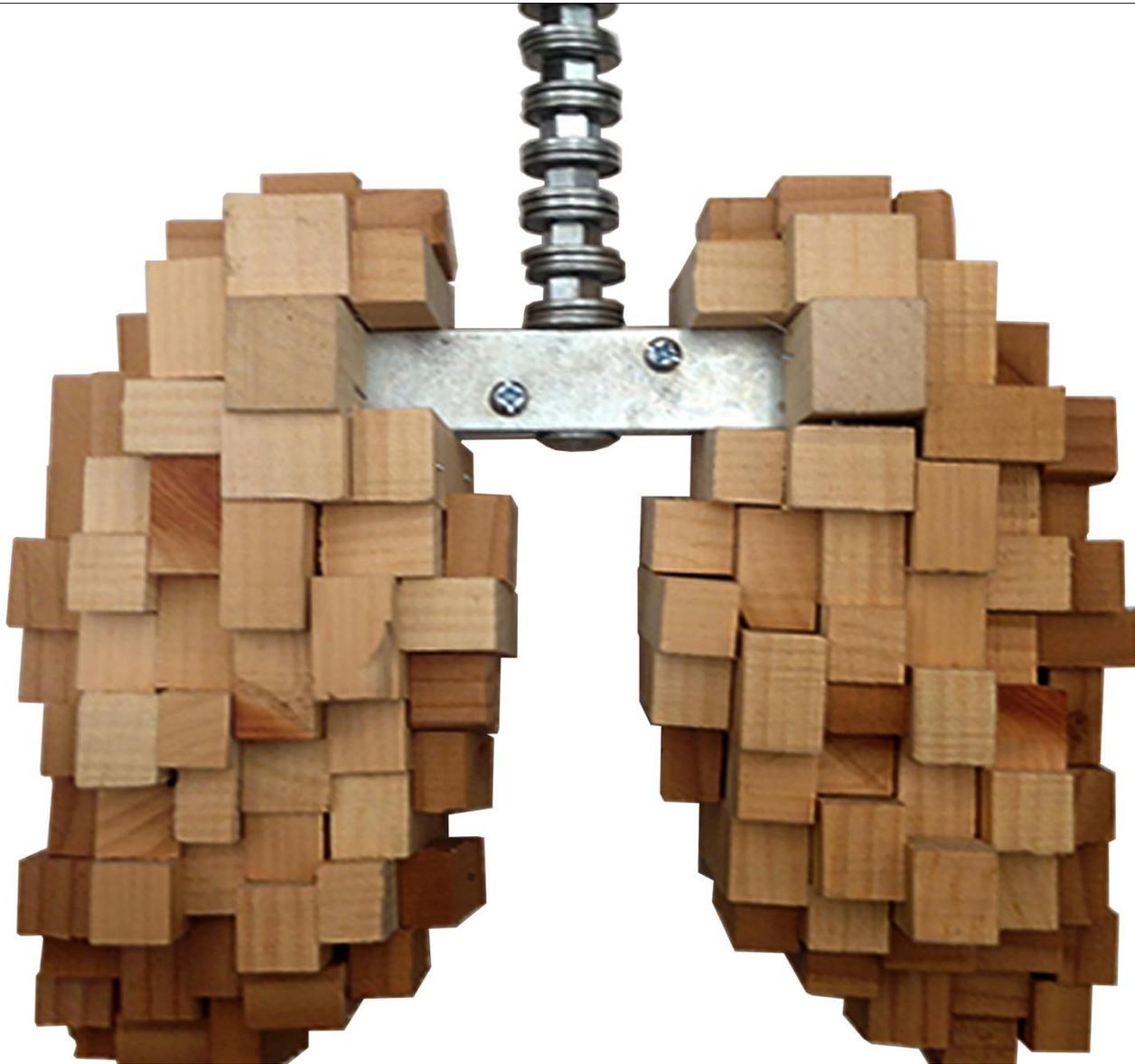
) in the... carcinogenic +



Globally, 4.3 million people die annually and accounts for nearly 4 – 6 lakhs deaths from exposure to household air pollution

region of India constitute over 900 plywood manufacturing units out of over 2000 such units across India

# Formaldehyde: Sources and Its Health Effects



**Composite Wood** products can use adhesives and finishes that contain *Urea-Formaldehyde*, a chemical with linkages to ***cancer, asthma, and respiratory diseases***. To avoid these hazards, look for wood products labeled *No Added Formaldehyde (NAF)*, *Ultra-Low Emission Formaldehyde (ULEF)*, or *No Added Urea-Formaldehyde (NAUF)*.

# Formaldehyde Sources

Formaldehyde is a **colourless**, flammable gas at room temperature which is found in certain resins used in the manufacture of composite wood products (*i.e.*, hardwood plywood, particleboard and MDF)

Formaldehyde is also listed under section 112(b)(1) of the Clean Air Act as a **hazardous** air pollutant

In 1991, EPA classified formaldehyde as a probable human **carcinogen**, “based on limited evidence in humans, and sufficient evidence in animals,” and derived an inhalation unit risk factor for assessing formaldehyde cancer risk

## Formaldehyde Types:

- Urea Formaldehyde
- Phenol Formaldehyde
- Melamine Formaldehyde

# Formaldehyde Health Effects

*Sick-Building Syndrome arising due to lack of Fresh Air, Paint Fumes, Construction Materials, Lead or Toxic Paint, etc*

## Short-term Effects

Burning

Skin Irritation

Severe Coughing

Inflammation of the Lungs

Irregular Heartbeat

## Long-term Effects

Sensitization

Eczema

Cancer

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**History**

# History of this Rulemaking

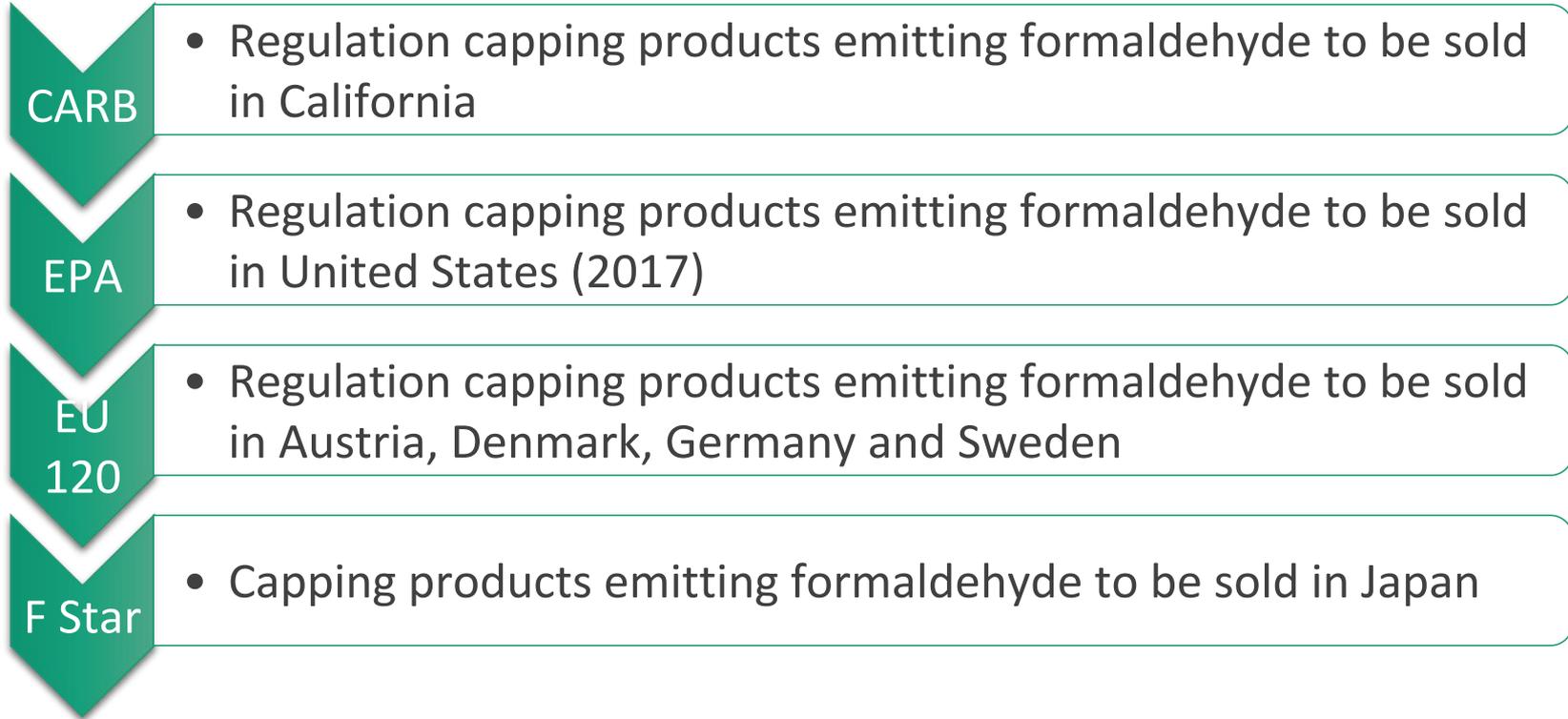
In 2007, CARB (California Air Resources Board) issued an ATCM (Airborne Toxic Control Measures) to reduce formaldehyde emissions from hardwood plywood with a composite or veneer core, MDF, and particleboard, products referred to collectively as composite wood products

The CARB ATCM was approved on April 18, 2008, by the California Office of Administrative Law and the first emission standards took effect on January 1, 2009

On December 3, 2008, EPA (Environment Protection Agency) issued an Advance Notice of Proposed Rulemaking (ANPR) that announced EPA's intention to investigate whether and what regulatory or other action might be appropriate to protect against risks posed by formaldehyde emitted from the products covered by the CARB ATCM as well as other pressed wood products

The Formaldehyde Standards for Composite Wood Products Act, or Title VI of TSCA (Toxic Substances Control Act), 15 U.S.C. 2697, was enacted on July 7, 2010

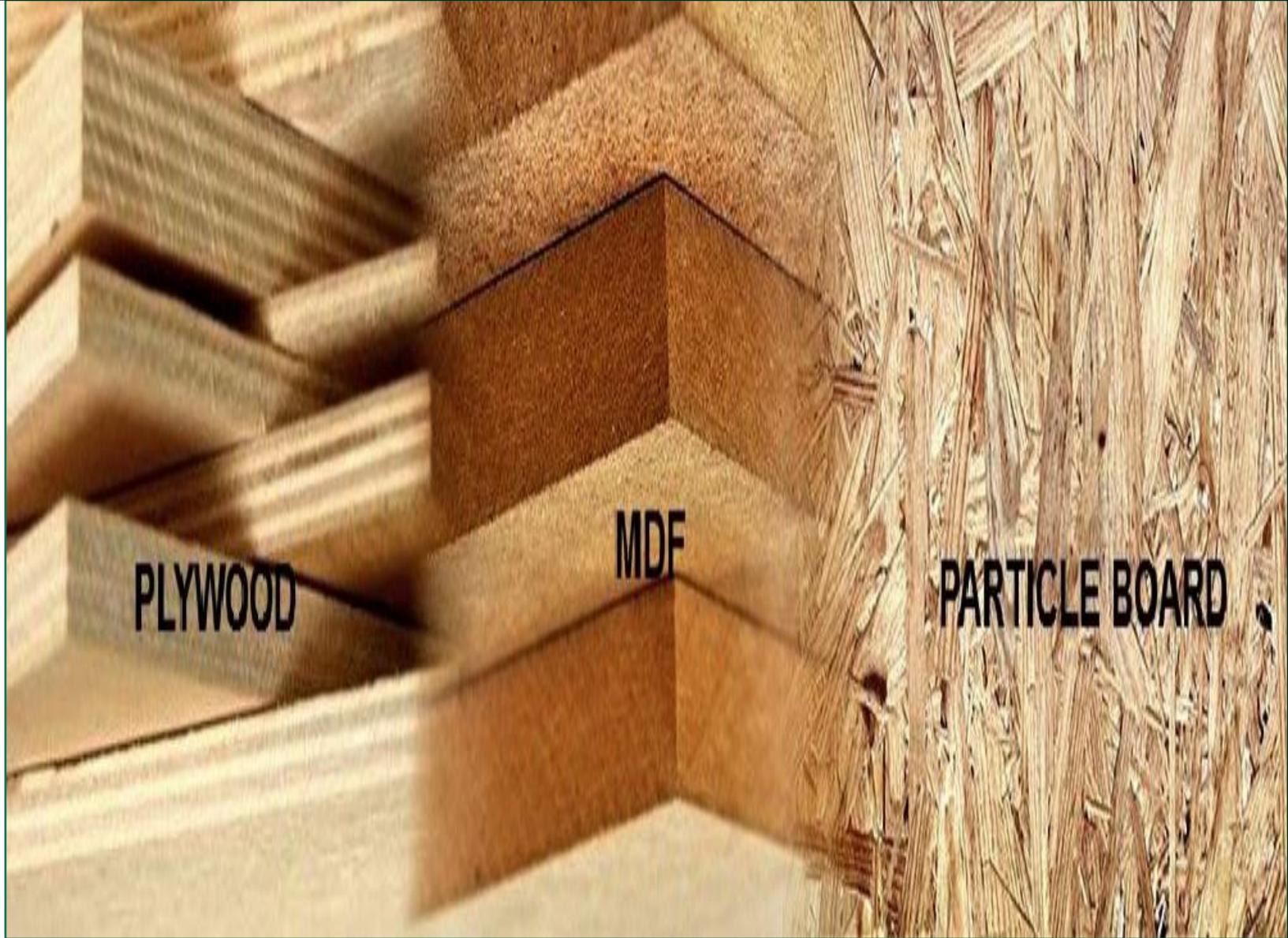
# Standards



## WHY CARB & TSCA Title VI?

CARB & TSCA Title VI is the most stringent of all existing certifications today. This is a regulatory requirement standard applicable and accepted in the United States. This helps manufacturers/panel producers attain LEED Credit IEQ 4.4.

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## Applicability

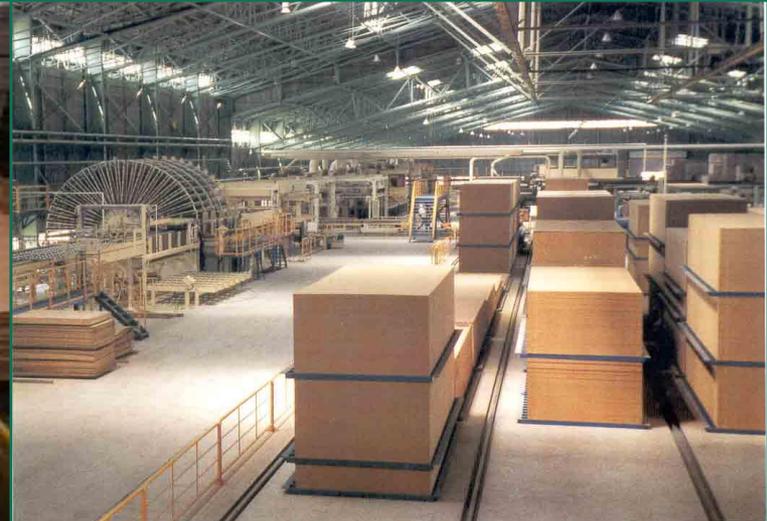
## Applies to:

- Hardwood Plywood (HWPW) (veneer and composite core)
- Particleboard (PB)
- Medium Density Fiberboard (MDF) and thin Medium Density Fiberboard (tMDF)

## Does not Apply to:

- Solid wood materials
- Sawn wood
- Composite materials made from wood and plastic
- Laminates

# Who is subject to final rule requirements?



<b>Importers, distributors, and retailers</b>	<ul style="list-style-type: none"> <li>• Furniture stores or merchant wholesalers</li> <li>• Lumber, plywood, millwork, wood panel merchant wholesalers</li> <li>• Building material and supplies dealers</li> <li>• Manufactured (mobile) home dealers</li> <li>• Recreational vehicle (RV) dealers and merchant wholesalers</li> <li>• Other construction material merchant wholesalers, or wholesale distributors of manufactured homes and/or prefabricated buildings</li> </ul>
<b>Panel producers</b>	<ul style="list-style-type: none"> <li>• Veneer product manufacturing</li> <li>• Plywood product manufacturing</li> <li>• Engineered wood product manufacturing</li> </ul>
<b>Fabricators</b>	
<b>Third Party Certifiers</b>	<ul style="list-style-type: none"> <li>• Laboratories conducting independent third-party formaldehyde emissions testing of regulated composite wood products</li> </ul>

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## Purpose of Certification

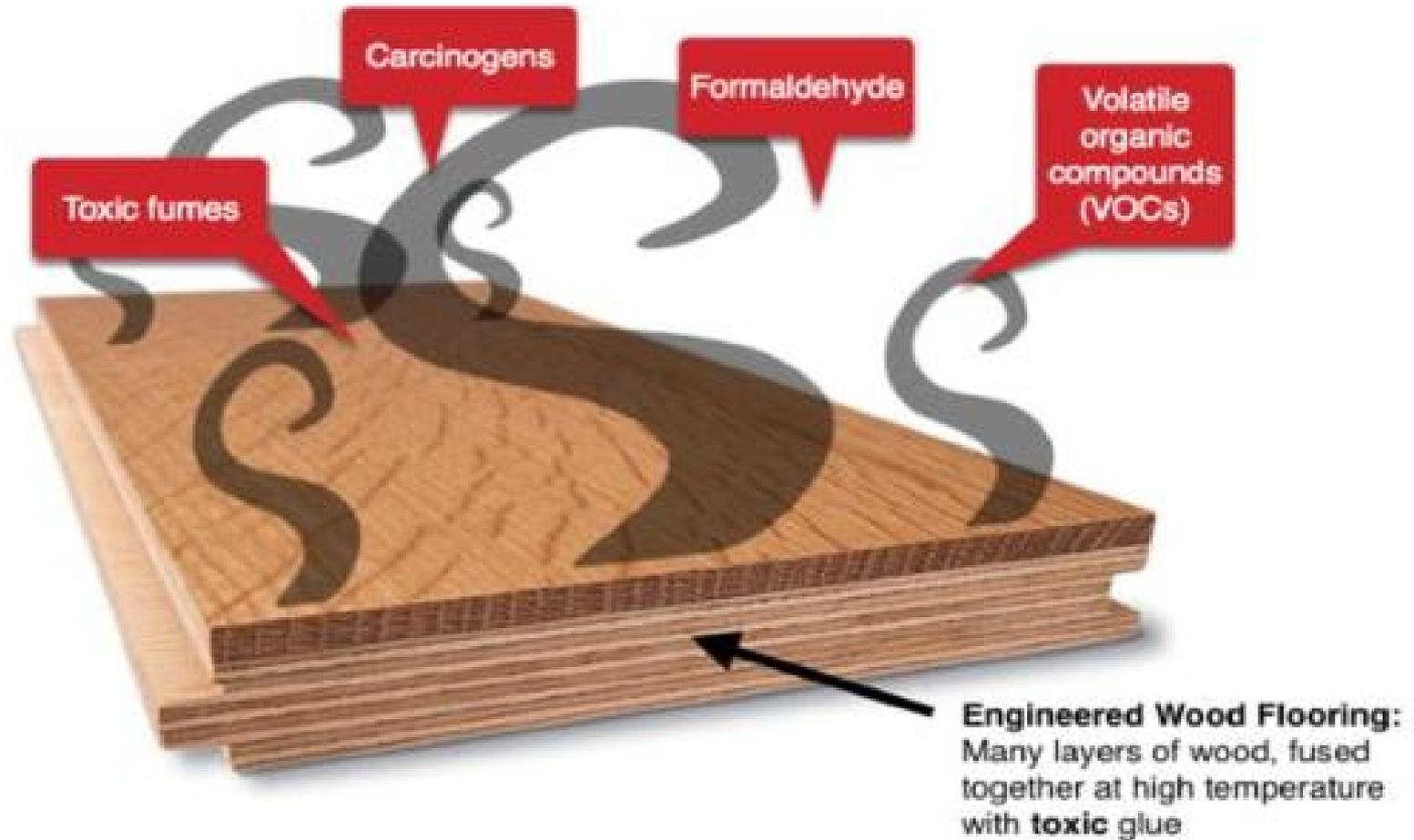
Most of our time today is spent in home and/or office leading to increased exposure to VOCs. It is hence pertinent to steer towards low-emitting products

The purpose of this standard is to reduce formaldehyde emissions from composite wood products, and finished goods that contain composite wood products, that are sold, offered for sale, supplied, used, or manufactured for sale in United States

The reduced exposures to formaldehyde will result in avoided adverse health effects. The emission standards and other requirements of this rule will reduce emissions of formaldehyde from composite wood products for individuals of all ages that are exposed, and children may accrue higher benefits from the exposure reductions compared to adults

Since, approximately **23% of Indian plywood and wood products are exported to USA** every year, there is a tremendous growth potential in this region as the manufacturers are yet to penetrate majority of the international market.

# OUTGASSING



## Formaldehyde Emission Standards

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# Formaldehyde Emission Standards

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CARB Phase 2 Formaldehyde Emission Standards based on the Primary Test method (ASTM E1333) in parts per million (ppm)

<b>HWPW-VC</b>	<b>HWPW-CC</b>	<b>PB</b>	<b>MDF</b>	<b>Thin MDF</b>
0.05	0.05	0.09	0.11	0.13

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HWPW-VC: Hardwood Plywood-Veneer Core

HWPW-CC: Hardwood Plywood-Composite Core

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# Business Advantage

# Benefits to Industry



# Benefits to Industry

**Industry**

Customer satisfaction

Help in generating economic growth for the industry

Worldwide recognition of work and employees

Ensuring consistency in the quality and performance by demonstrating due diligence

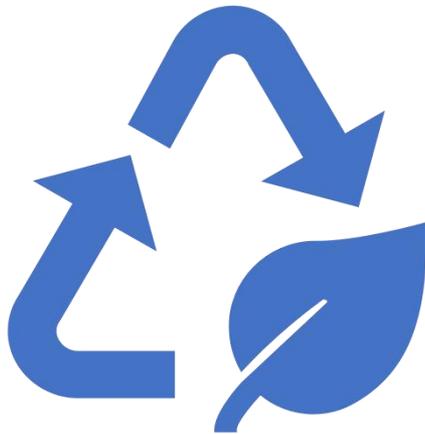
Improved Management practices to meet up the International and Local market and customers benchmarking

Manufacturers can ensure ongoing commercial success and maintain a competitive advantage with the correct product certification

Ability to break into new markets and maximize the potential of new markets, like Handicrafts Industry

Due to globalized recognition of this certification the supply chain can exist across many different geographic regions

# Benefits to Public



- Enables safeguarding end-consumers from sick building syndrome
- *Improved indoor air quality:* There is a direct correlation between increased productivity and employees who love being in their work space
- Reduce incidents of eye and respiratory irritation, headaches, fatigue
- Healthier environment for building occupants who are sensitive to certain products
- Reduce pollution of natural waterways
- Responsible and sustainable practices measures will help in avoiding or controlling emissions adding up to climate change factors
- Certification label enhances prospects of sustainable economic growth by providing international market and trade access enabling people to consume responsibly

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**Noteworthy data**

As per reports by IMARC Group titled, “Indian Plywood Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast”, the market reached a value of:

1. USD 4.4 Billion in 2018
2. USD 4.6 Billion in 2019

Expanding distribution network and exclusive outlets of furniture manufacturers in the region has also helped in influencing the market for plywood

Owing to this, the market is further expected to reach a value of USD 5.7 Billion by 2024

*continued...*

operational wood panel processing factories practically that can be counted as plywood producing



The Indian wood panel industry is estimated to be around INR 28,000 crore and is growing at the rate of 10-12% annually



significant product in terms of the overall demand for wood panels and the market size for Indian plywood industry is approx INR



wood panels, mainly for new housing construction (~90% of the total demand) and the remaining (10%)



In the last five years, the segment witnessed a CAGR of 6-7%.

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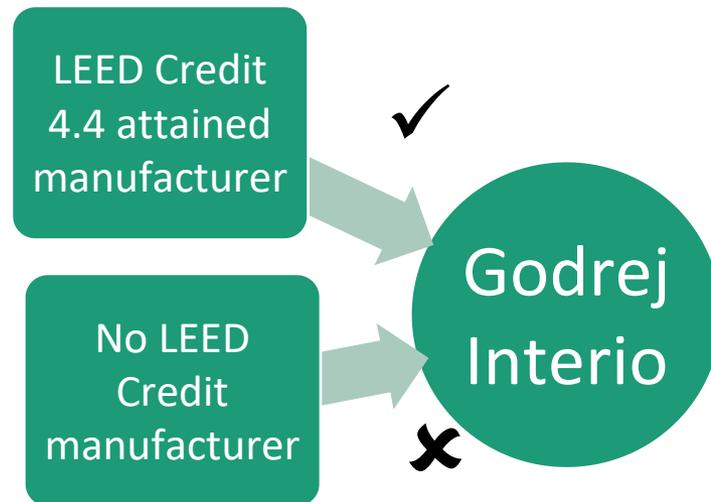


## Entry into New Markets

## GODREJ INTERIO

- Apart from benefiting the occupants, it also benefits the company through improved health, higher productivity and reduced absenteeism
- GI demonstrates its leadership position with 16% share in DOSS (Desking, OPOS, Seating & Storage) market and **6.1% share in organized Home Furniture market**
- Green guard Certified Products; LEED Green building Certification

Manufacturer of Composite Wood products when certified by CARB/EPA, can supply their certified raw material to suppliers/vendors of renowned furniture making companies which prefer low-emitting VOCs (such as formaldehyde) from products, such as Godrej Interio



# Be a trusted Green Building supplier

Green building brings together a vast array of practices, techniques, and skills to reduce and ultimately eliminate the impact of buildings on the environment and human health



Green building needs 'green products' and hence **green product certification**



By getting CARB/TSCA Title VI Certification, manufacturers are eligible to sell certified raw material for Green Buildings

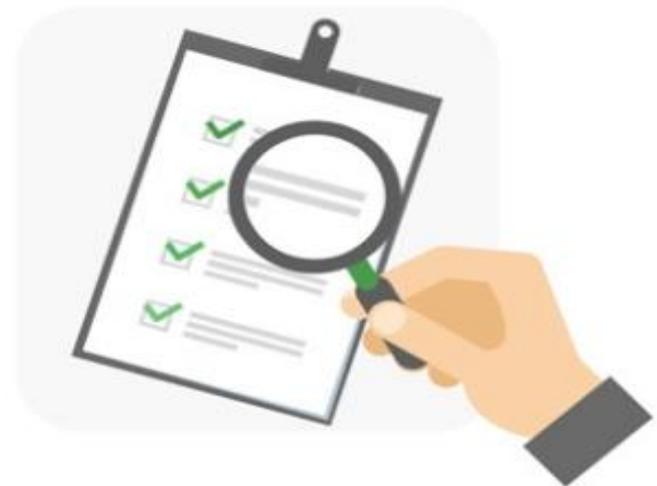


Meeting client requirement of LEED credit attainment (IEQ Credit 4.4)

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**Step 1: Application**



**Step 2: Audit**



**Step 3: Certification**

## **Certification Procedure**

*The CARB & EPA certification process is based on a one-year certification cycle, followed by four quarterly audits/on-site inspections and laboratory testing to verify continued compliance*

Application received and reviewed by GIPL to seek all required information from client



Proposal sent and agreement signed between client and GIPL



Quality Control Manual and other relevant documents received by GIPL Inspector



On-site inspection conducted and samples drawn tested by CARB approved TPC Lab



Inspection report submitted and reviewed, non conformance identified



Closure of non-conformances and issuance of Certification

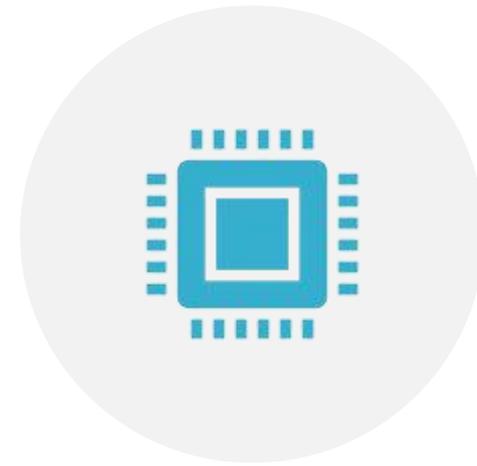


Quarterly inspections and lab testing for Clients

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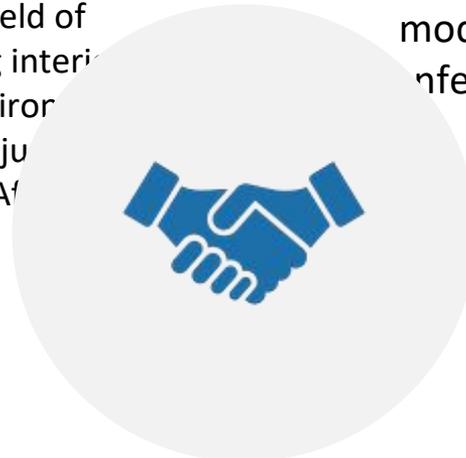


## GIPL Profile



GIPL is one of **India's leading third party certifier** providing evaluation, assessment, verification and monitoring services in the field of environment, sustainability, building interior forestry, wildlife, climate change, environmental claims and fishery having operational jurisdiction in Asia, Middle-east and North Africa

It has a state-of-the-art 3,380-square foot modern office space that is equipped with modern computer systems, video conferencing equipment, library and cafeteria



## Vision

Our vision is to promote sustainable decision-making and policies in every sector of the economy around the world, in order to safeguard our environment, support workers and communities, and raise the standard of living for all

## Mission

Recognize the outstanding achievements of companies, institutions and organizations who are meeting the highest levels of performance in environmental protection, social responsibility, product/process sustainability

# GIPL's Footprints



Monitoring and  
Evaluation



Expertise in Standard  
Development



Large number of  
clientele  
representation



Collaboration with  
reputed  
conglomerates

# Our Association & Project Partners



# Scope of Services





CARB & EPA TSCA Title VI



Network for Certification and Conservation of Forest  
(Forest Management)



Vriksh & Shipment Certificate



Aquaculture Stewardship Council



Monitoring & Evaluation

# Milestones achieved by GIPL

With great expertise in execution and implementation of CARB certification, GIPL is the **FIRST & ONLY** agency providing third party CARB/TSCA Title VI certifications in India

Enriched with trained administrative staff, technical know-how at ground level and CARB approved auditor, GIPL has the potential to carry out desired activities involved in achieving the certification successfully

GIPL made its footprints for CARB Certification in `2015 by certifying 1<sup>st</sup> client in India

By far GIPL has assessed and participated in the certification of 9 manufacturers of composite wood products (*i.e.* MDF, thin MDF, Hardwood Plywood – Veneer Core and Particleboard) in compliance with CARB Phase 2 & EPA TSCA Title VI requirements

# CARB & EPA Certified Clients

Year	CARB certified clients	EPA Certified clients	Certification under process
2015	1	NA	-
2016	3	NA	-
2017	3	0	-
2018	4	4	-
2019	8	8	3
2020	9	9	5

# CARB & EPA Certified Clients

Sr No.	Name of Client	Certified Products
1	Century Plyboards (India) Ltd.	Thin MDF
2	Vritti Impex	HWPW-VC
3	Balaji Action Buildwell	MDF, thin MDF
4	Greenpanel Industries Ltd. (Rudrapur)	MDF, thin MDF, HWPW-VC
5	United Timber Works	HWPW-VC
6	Mampilly Plywood Industries	HWPW-VC
7	Greenply Industries Ltd. (Rajkot)	HWPW-VC
8	Realply Industries Pvt Ltd.	HWPW-VC
9	Greenpanel Industries Ltd. (Chittoor)	MDF, thin MDF



# CARB & EPA Certified Clients

## Century Plyboards (India) Ltd.

- MDF Manufacturer-sought CARB/TSCA Title VI Certification - **to attain brand value-** when there was no buyers demand

## Knitpro International (Certification in process)

- Plywood Manufacturer –needed CARB/TSCA Title VI Certification for Certified Material – to be used in making knitting needles –for **Export** to US

## United Timber Works (Certified client)

- Plywood manufacturer –uses CARB/TSCA Title VI Certified material -- in making floor of containers (**buyers demand**)

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Turn your Weakness into **Opportunity**

# Weakness

Insufficient stock control; outdated system

Fear of taking risks

Sudden buyer demand

Lack of quality awareness

# Opportunity

In place system and sufficient stock control

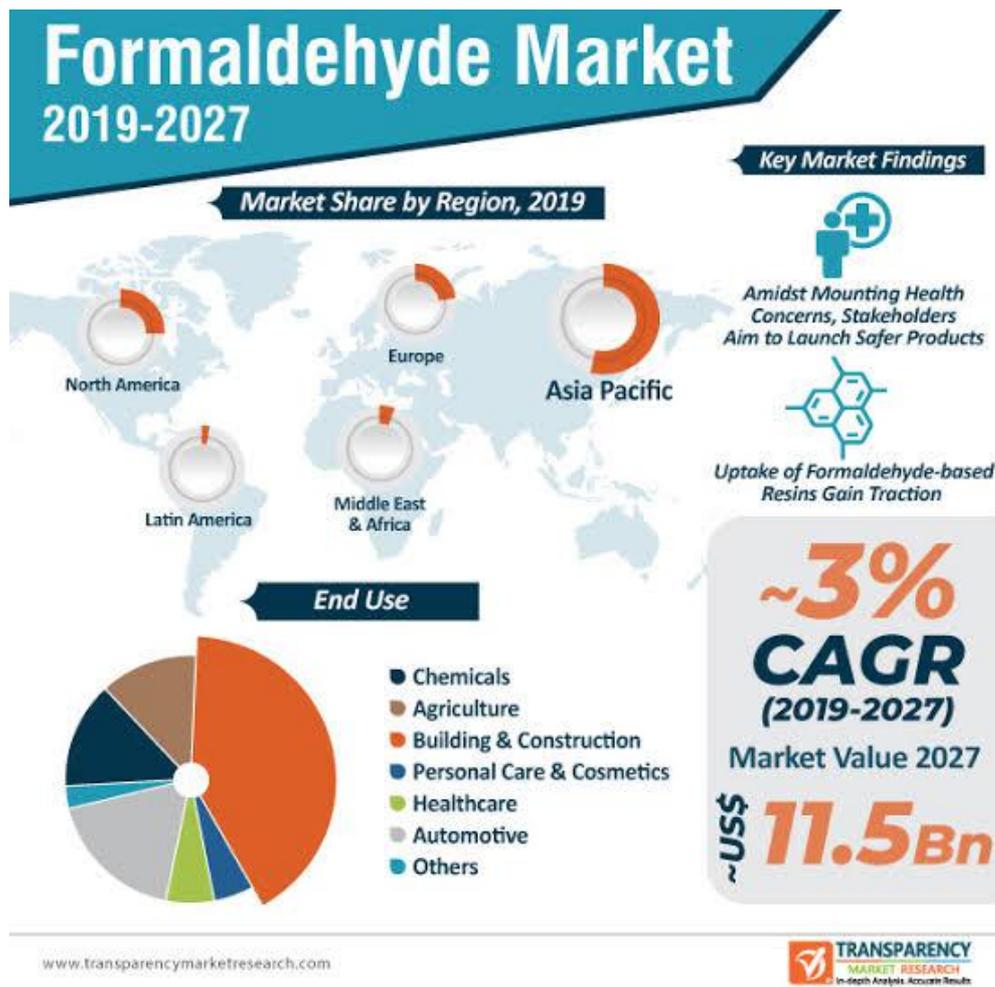
Low probability of risks

Buyer demand can be met anytime for products within certification scope

Quality maintained through awareness trainings

# GIPL's Future Plan of Action

- To increase CARB & TSCA Title VI market potential in existing sector
- To educate and create awareness with credible and transparent information amongst manufacturers, traders, fabricators of composite wood products and other individuals about CARB & TSCA Title VI certification and emissions from composite wood products



## For queries please contact

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## Thank You...

Our second webinar will be on CARB & EPA Standard Requirements and the details of the date, time & agenda of the webinar will be shared with you soon.