



School Building Science Fridays™

Healthy Materials for Healthier Schools

June 10, 2022

Welcome!



About GBRI



**EDUCATION
PARTNER**



STATE OF RHODE ISLAND
ENERGY EFFICIENCY &
RESOURCE MANAGEMENT COUNCIL



**The American
Institute
of Architects**



COLLABORATIVE FOR
HIGH PERFORMANCE
SCHOOLS.

Welcome Home!

Let's join hands not only to build a greener world but also a equitable one.

GET STARTED



Let's join hands not only to build a greener world but also an equitable one!



WELL AP V2 EXAM PREP

STUDY WITH JESLIN VARGHESE, WELL FACULTY

UPCOMING SESSIONS

JULY 2022

AUGUST 2022

SEPTEMBER 2022

Register now!

*Jeslin
Varghese*

Instructor



- ✓ Online exam prep sessions taught by WELL Faculty
- ✓ On-demand access
- ✓ Practice questions
- ✓ 3 simulated WELL AP Mock Exams
- ✓ A roadmap
- ✓ Study group
- ✓ Instructor & peer study support
- ✓ Pass your exam on the first try – guaranteed!



**Approved
Continuing
Education**

Approved for 1 HSW LU

Green Building Research Institute
Provider Number: 40119134

A certificate of completion will be available for download within 24 hours of today's session.



Today's Webinar

- Welcome & Introduction: Natalie Van Dreal, CHPS
- Speaker Presentations:
 - Raja Tannous, Berkeley Analytical
 - Patty Karapinar, Arch Nexus
 - Gretchen Withers, Oregon Door
 - John Sumlin, Tarkett
- Audience Questions





Housekeeping

- Reminder: This session is being recorded.
- Post questions at any time in Q&A box and comments at any time in Chat box.
- All attendees have been muted to limit background noise.
- Recording and slides will be emailed to registrants and will be available on-demand on both CHPS and GBRI websites.
- Resources at end of deck for further learning.

About CHPS

WHO WE ARE: A non-profit collaborative of school districts, architects, builders, building scientists, health professionals, and consultants dedicated to fostering healthy learning environments.

WHAT WE DO: Provide technical resources for school design, construction, operations and maintenance standards through our extensive criteria programs and project reviewers.

MEMBERSHIP: We rely on member support to do what we do. Please consider joining us.



<https://chps.net/join-us>

Our Impact

- Over **700** schools have been recognized as meeting the CHPS Criteria
- CHPS Criteria is in use in **14** states and has been adopted as the construction standard in over **60** public school districts.



Chartwell – Seaside, CA



With Gratitude to Our Sponsors



HEALTHY
SCHOOLS
NETWORK



What is *School Building Science*?

- The body of knowledge that informs the design, construction, operations, and occupancy of school buildings for the benefit of students, educators, staff, and the environment.
- The body of knowledge ~~about the built environment~~ that impacts how children learn and thrive.



Mapleton Adventure School – Mapleton, CO



Learning Objectives



**Approved
Continuing
Education**

1. What defines a healthy material and what standards are available for verification
2. A methodology for selecting healthy materials
3. The opportunities and challenges between manufacturers, testing labs, and specifiers
4. Inspire healthy materials manufacturing, testing, and incorporation into all school projects

What is a healthy material?

Healthy materials are ones that reduce chemical exposure to building occupants



Pollutants are **2-5X** higher inside than outside



Healthy Materials Standards & Testing

Raja Tannous

Co-Founder & Laboratory Director at
Berkeley Analytical



What defines a healthy material and what standards are accepted for verification

- What are VOC low emitting materials (LEM)?

applies to any product category within the envelope-waterproofing membrane of an enclosed indoor environment such as walls, ceilings and floors.

- What are the tests and standards behind the market claim?

CDPH v1.1/1.2 are the latest accepted versions of the originally known CA Section 01350 and have become the benchmark testing standards behind almost all of the LEM labels and VOC emissions certification programs. This method is applicable to products that can be tested whole or by representative sample in environmental chambers. This includes, paints and coatings, sealants, adhesives, wallcoverings, floor coverings, acoustical ceilings, wood paneling, wall and ceiling insulation used in public and commercial office buildings, schools, residences and other building types

<https://www.cdph.ca.gov/Programs/CCDPPH/DEODC/EHLB/IAQ/CDPH%20Document%20Library/List%20of%203rd%20party%20certifications%20for%20CDPH%20v1.2-Oct-10-2019%20ADA.pdf>

(Hyperlink to the List of certifications that use the CDPH as basis to their programs)

- Why LEM listed products are considered healthier?

Using them reduces the concentrations of chemical of concern available for inhalation including known and probable human carcinogens, reproductive toxins, systemic toxins with noncancer chronic effects. These products meet ½ the allowable non-cancer Chronic Reference Exposure Levels (CRELs) values. Formaldehyde is allowed the full CREL value of $9 \mu\text{g m}^3$. See Table 4-1 in the standard for the complete list of the target chemicals considered for pass/fail criteria.

The Final Laboratory Report Issued to the Manufacturers and Certifiers Includes the Emission Assessment Criteria

- Emissions for Individual VOCs of all:
 - ✓ Known and Probable carcinogens
 - Proposition 65 list ● Toxic Air Contaminants
 - ✓ Reproductive toxicants
 - Proposition 65 list
 - ✓ Chemicals with Chronic Reference Exposure Levels (CRELs)
 - CREL List: “airborne concentration that poses no significant health risk to individuals under indefinite exposure” - Published by OEHHA
<http://www.oehha.ca.gov/air/allrels.html>
- **Modeled** concentrations of VOC at 14 days not to exceed:
 - ✓ ½ of the CREL except
 - ✓ Formaldehyde: 16.5 ug/m³ before 12/31/2011 and 9 ug/m³ (full CREL) after 12/31/2011
- Modeled for different building environments such as a school classroom or a private office. The product loading, room volumes and outdoor air flows are considered during modeling.

Who is behind the development of CDPH CA Section 01350 standard and why being endorsed by the green building rating systems?

- The only health-based building material specification – Beyond TVOC and Formaldehyde.
- Includes ASTM, EPA test standards and ASHRAE. *D 5116, D 5197, U.S. EPA. Method TO-17 and ANSI/ASHRAE Standard 62.1-2007.*
- References international ISO testing and labels standards. *ISO16000-9, -11 and ISO 14021 (Type II environmental labeling)*
- The testing laboratories must be accredited to *ISO 17025* and the 3rd party Certifiers must be *ISO 17065*.
- The standard is referenced by 3rd party labels, certification programs and codes.
See next slide and hyperlink in first slide for list of labels and organizations.
- Transparent, strict timelines and quality control requirements for manufacturers, labs and certifiers.
(publicly available standard, sample handling, sample age, sample selection, sample location, packaging, shipping, and sample preparation for testing are detailed and enforced – Section 2 of the standard and Table 2-1 for timelines and handling)
- Chain-of-Custody (COC) must signed and accompany the sample throughout the process and included in the final report.
- The stakeholders included government agencies (DGS, CARB, OEHHA); manufacturers and their associations (CRI, RFCI, BIFMA); Labels and rating systems (CHPS, SCS, ULE) and testing laboratories (MAS, Eurofins, AQS and Berkeley Analytical).

CDPH Section 01350 is cited in

Building codes/standards:

- ANSI/ASHRAE/USGBC/IES Standard 189.1-2014: Standard for the Design of High Performance Green Buildings Except Low-Rise Residential
- California Green Building Standards Code (CALGreen) 2016
- International Green Construction Code (IgCC) 2015

Green/healthy building rating systems:

- USGBC LEED Certification
- IWBI Well Certification
- Collaborative for High Performance Schools (CHPS)

Product standards:

- The Health Product Declaration (HPD) Open Standard, Version 2.1.1, 2018.
- NSF/ANSI 140, NSF/ANSI 332, NSF/ANSI 342 Product sustainability standards
- UL 100, UL 102, UL 115 Product sustainability standards
- NSF/UL National Standard for Health Based Emission Standards *
- UL2904 Standard test method for particle and chemical emissions from 3D printers *

Product certification programs:

- GREENGUARD Gold Certification, UL Environment
- FloorScore, Resilient Floor Covering Institute (Certifier: SCS Global Services)
- Indoor Advantage Gold, SCS Global Services
- Green Label Plus Carpet Program, Carpet & Rug Institute

*Under development

Transparent and Publicly Available Standard

**STANDARD METHOD FOR THE TESTING AND EVALUATION OF
VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING
ENVIRONMENTAL CHAMBERS
VERSION 1.2**

*(Emission testing method for California Specification 01350.
Supersedes the previous version of
STANDARD PRACTICE FOR THE TESTING OF VOLATILE ORGANIC EMISSIONS FROM VARIOUS SOURCES
USING SMALL-SCALE ENVIRONMENTAL CHAMBERS)*

PREPARED BY:

**Indoor Air Quality Section
Environmental Health Laboratory Branch
Division of Environmental and Occupational Disease Control
California Department of Public Health**

JANUARY 2017



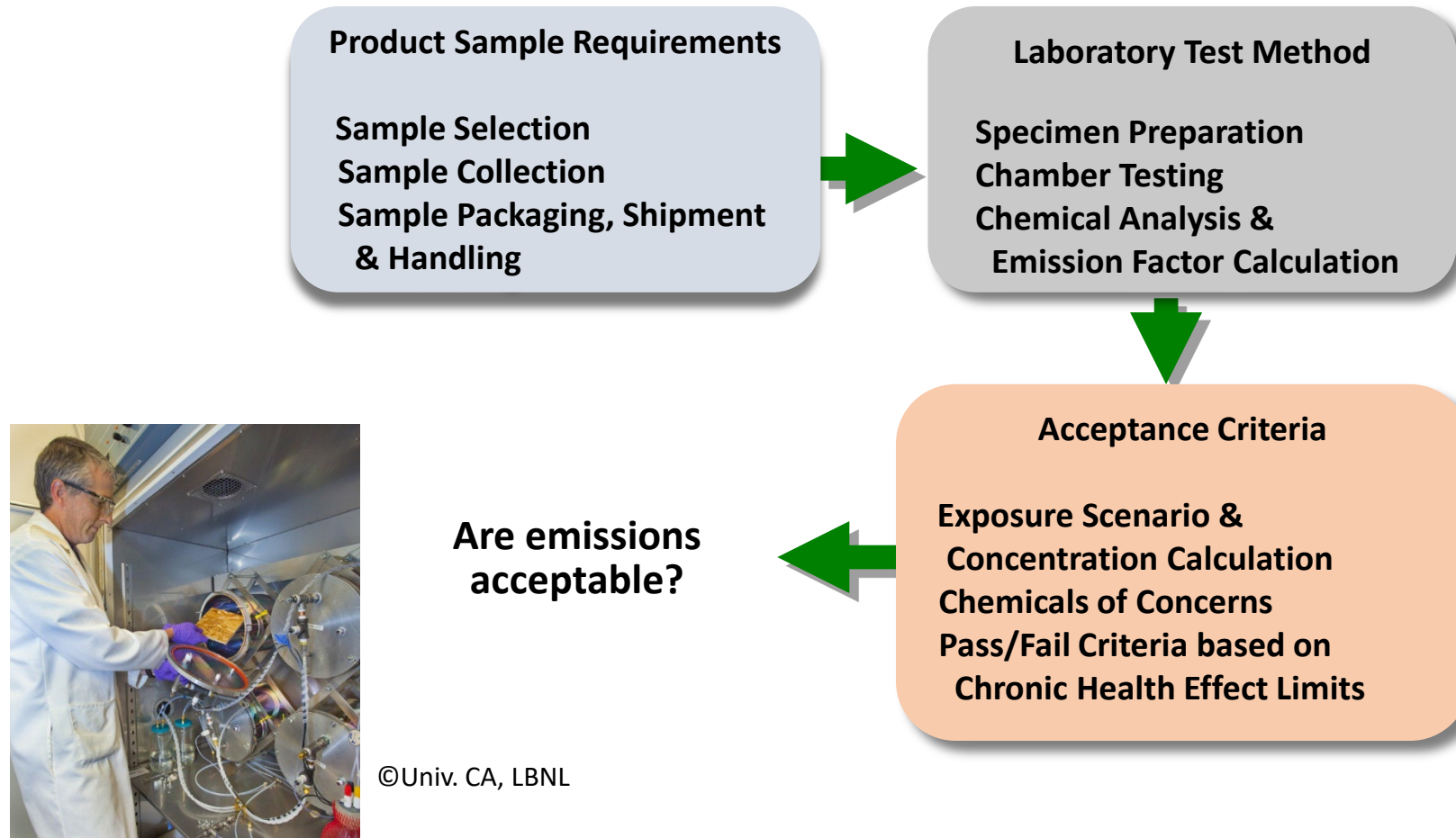
California Department of Public Health
DR. KAREN SMITH, Director

California Health and Human Services Agency
DIANA DOOLEY, Secretary

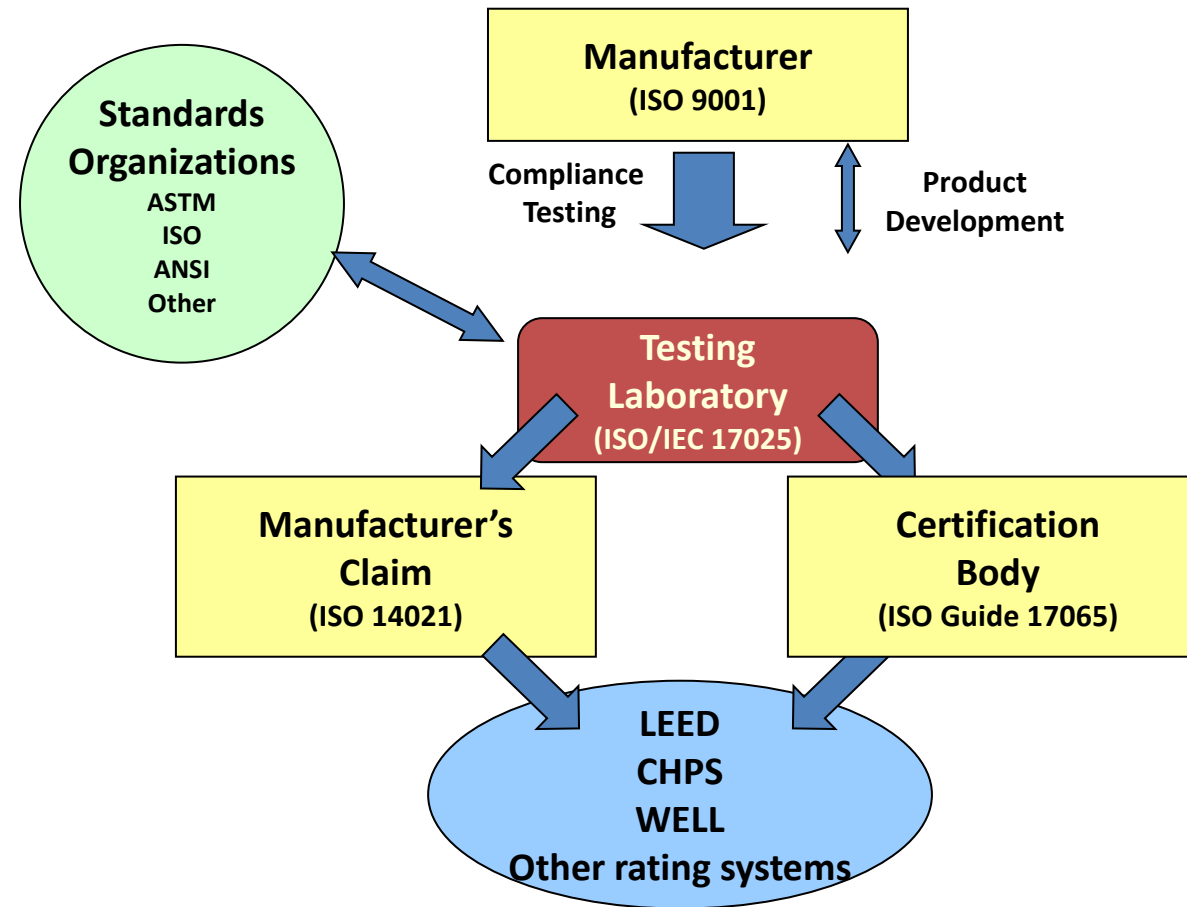
State of California
EDMUND G. BROWN JR., Governor



CDPH – Section 01350 is a Complete Standard



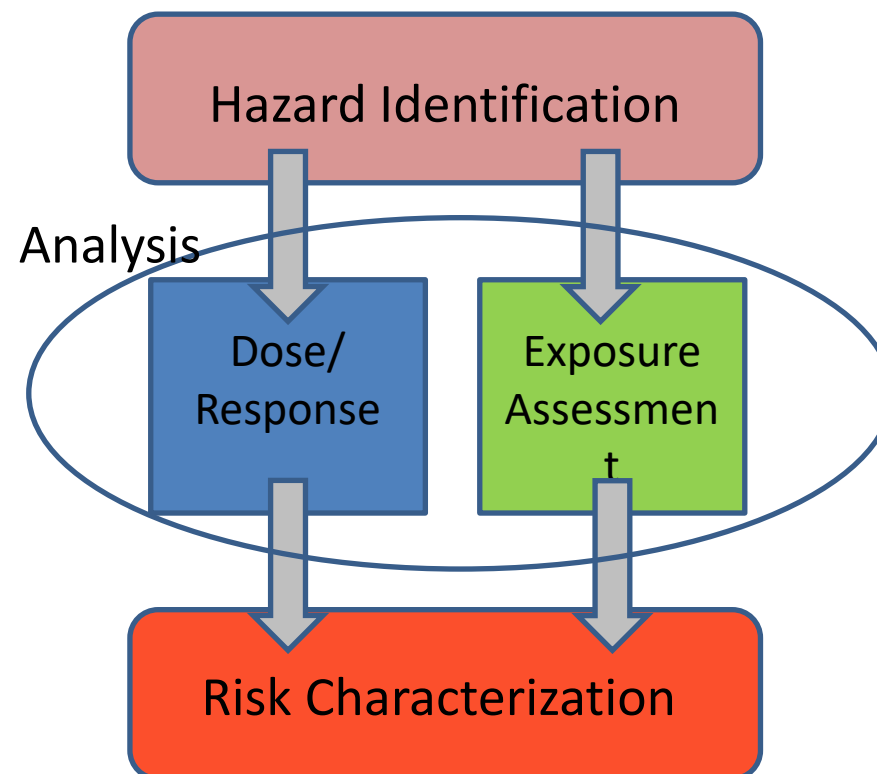
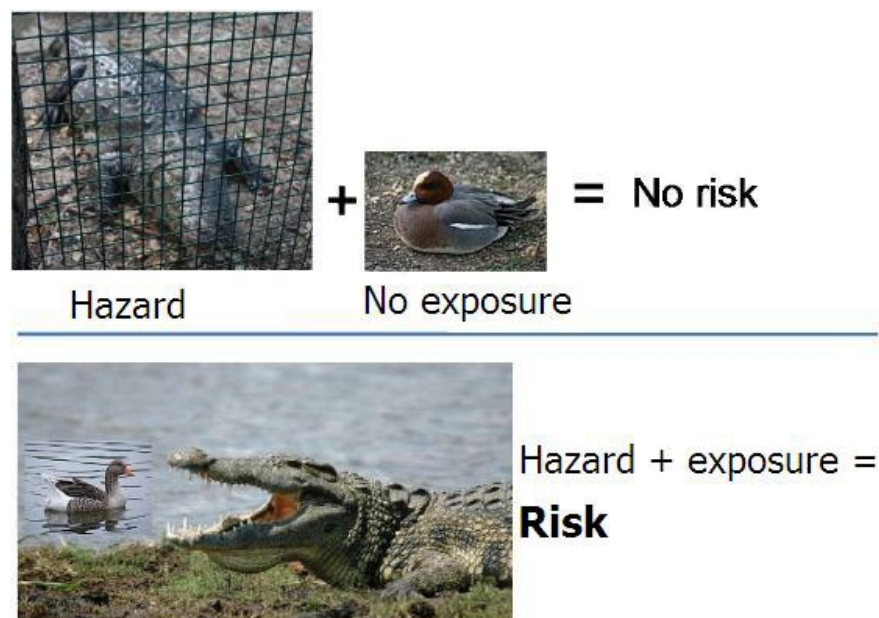
Role of the Testing Lab – Quality and Confidence



The test labs are at the heart of the verification process. The test reports provide data that impacts market claims, supply chain, manufacturing process and innovation. Reformulation and introduction to new products such as epoxy and polyurethane coating for floors, caulking and coating for noise, fire, moisture and energy reduction, recycled materials, Self-declarations as emerging databases and allow manufacturers and consultants to link test certificates and declarations directly to their portals.

There are Three Major Pathways for Chemical Exposure to Building Occupants
Inhalation; Hand-to-Mouth; Dermal

Hazard – Exposure - Risk



The CDPH standards deals with exposure and health risks from inhalation exposure only from C5-C17 VOCs.
It does not cover metals, plasticizers such as phthalates and most flame retardants.

VOC Emissions vs. VOC Content

Many circulating specifications confuse VOC content with VOC emissions

Attributes	Requirements
VOC Content- Applies to architectural coatings The purpose is to limit the In-Can VOC content expresses as g/L. Atmospheric and occupational	<i>Paints and Coatings:</i> Comply with CARB SCM, 2007 or SCAQMD Rule 1113, 2016 Disclose exempt compounds >1% by weight DCM & PCE are not permitted <i>Adhesives and Sealants:</i> SCAQMD Rule 1168, October 6, 2017
VOC Emission – Expressed as mass per volume in room air available for inhalation by occupants.	Product are tested according to California Department of Public Health (CDPH) Standard Method v1.2–2017 and complies with the VOC limits in Table 4-1 of the method. Additionally, the range of total VOCs after 14 days (336 hours) was measured as specified in the CDPH Standard Method v1.2 and is reported (TVOC ranges: 0.5 mg/m ³ or less, between 0.5 and 5 mg/m ³ , or 5 mg/m ³ or more).



Specifying Healthy Materials

Patty Karapinar, AIA, LEED-AP BD C, WELL-AP
Associate and Director of Sustainability at
Architectural Nexus



Specifying Healthy Materials

- **Why choose healthy materials?**
 - Direct effect on health and wellbeing of building occupants
 - Exposure during the full life cycle of the product
 - It's our responsibility as architects
 - Cost myth: it doesn't have to be more expensive
 - Owner's liability
 - Supporting manufacturers investing in health



Specifying Healthy Materials

- **Our Priorities**

- Use less
- Reuse/Salvage
- Specify natural materials
- New materials: Healthy materials

Specifying Healthy Materials

- How do we **find** and incorporate new healthy materials?
 - Sustainable design databases
 - Company Transparency Initiative
 - Manufacturer websites and direct manufacturer contact

Internal LBC, CHPS and LEED projects database



Specifying Healthy Materials

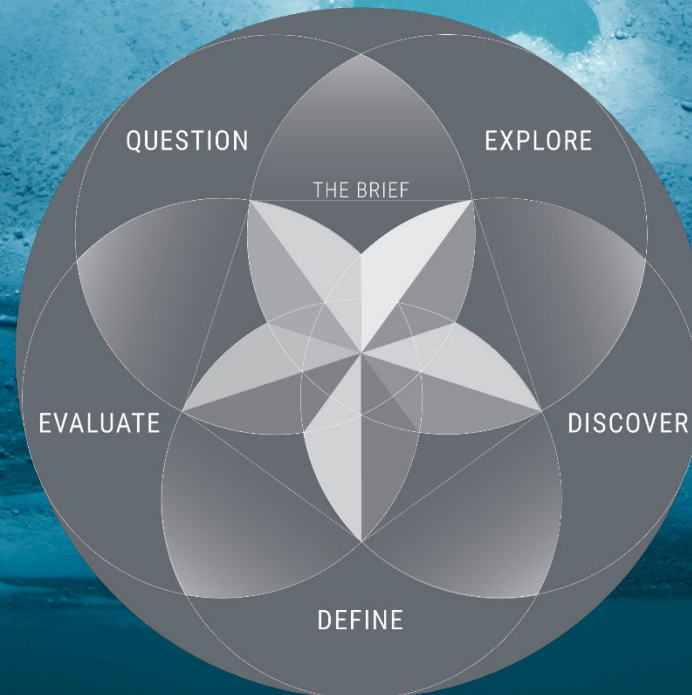
- How do we find and **incorporate** new healthy materials?

Master specifications

Design process

Specialists

DESIGN **PROCESS**



ARCH | NEXUS

Specifying Healthy Materials

- Resources

- Sustainable Minds Transparency Catalog: <https://www.transparencycatalog.com/>
- Mindful Materials: <https://mindfulmaterials.origin.build/#/shared/materials/>
- Declare Products Database: <https://declare.living-future.org/>
- UL Spot Sustainable Product Database: <https://spot.ul.com/main-page/>
- Health Product Declarations: <https://www.hpd-collaborative.org/>
- SCS Global (Indoor Advantage Gold): <https://www.scsglobalservices.com/certified-green-products-guide>
- ANSI/BIFMA e3 Furniture Sustainability Standard: <https://level.ecomedes.com/>





Why Manufacturers Invest in Health

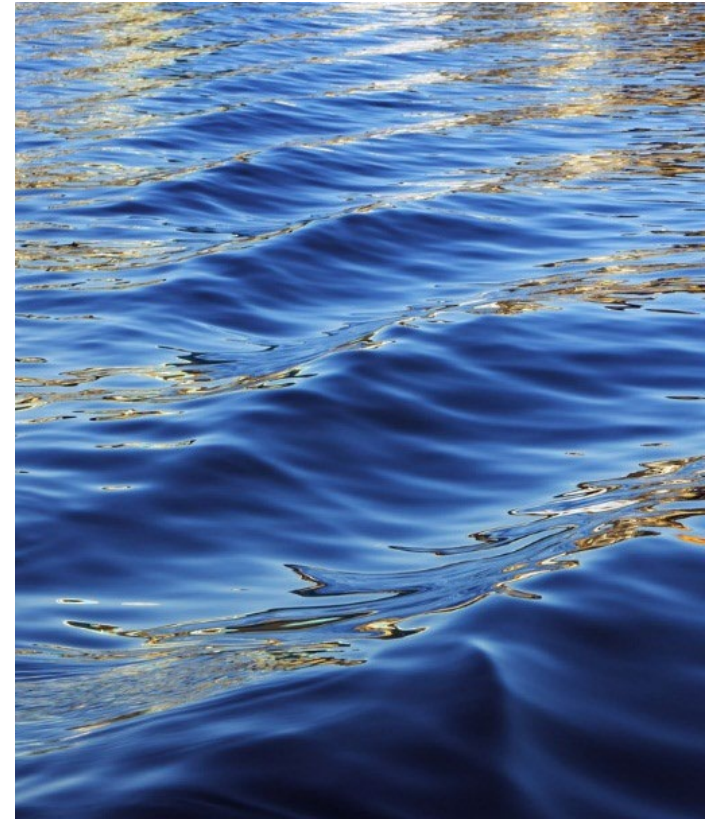
Gretchen Withers

Sustainability Specialist at
Oregon Door Company



Oregon Door

Architectural Wood Door Manufacturer- Winston, OR



WHY OREGON DOOR INVESTED IN HEALTHY MATERIALS??????

- Being located in the heart of America's Northwest, we appreciate the beauty of this great region and understand the responsibility a manufacturer must play as a good steward of the environment. Environmental responsibility is at the heart of our company's philosophy, and we continually strive to be the leader in providing sustainable solutions for all opening needs.
You see, we don't just work in this world—we live in it, too. We know that a healthy environment and healthy business practices go hand in hand. That's why we take every possible step toward promoting an environmentally conscious workplace and ensuring that our products meet the strictest green building standards.

Our location.....nestled in the Pacific Northwest

- Located 3 hours South of Portland, OR.
- CSI Division 8
- CHPS Member
- WDMA Member



SUSTAINABILITY = TRANSPARENCY

SUSTAINABILITY

- Believing in sustainability means one is willing to “walk the talk” in being transparent.

TRANSPARENCY

- Being transparent means that a company is willing to validate this and show their proof.

Architectural Door Construction Options



Particleboard
Core



Agrifiber
Core



Mineral
Core



Structural
Composite
Lumber Core



Acoustical
Core



Materials Transparency



INVESTING IN OUR FUTURE....



Oregon Door – Transparency Documents

- EPD – ENVIRONMENTAL DECLARATION
- LIVING BUILDING CHALLENGE - DECLARE LABEL
- HPD CERTIFICATION
- RECYCLED CERTIFICATION
- GREENGUARD CERTIFICATION
- GREENGUARD GOLD CERTIFICATION
- CHPS CERTIFICATION
- FSC CERTIFICATION

Transparency Documents.....



MATERIAL HEALTH DISCLOSURES

EQ C7.1: Approved for published HPD with minimum disclosure threshold of 1,000 ppm

Pre-Approved Product

Certificate Number: 2022-009
Issued: 01/20/2022
Expires: 01/19/2024

Products: Architectural Series doors with Agrifiber Core, Fire Rated Mineral Core, Particleboard Core, Structural Composite Lumber Core

Product Category: Flush Wood Doors

Manufacturer: Oregon Door
Winston, OR
<https://oregondoor.com>

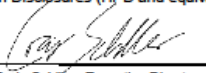
Reference Standards:

1. US-CHPS v2.0, EQ C7.1 Material Health Disclosures - https://chps.net/indoor-environmental-quality#EQ_C7.1

The Collaborative for High Performance Schools (CHPS) has reviewed the above products for approval as a CHPS Product™ based on compliance with the requirements of the most recent version of the CHPS Criteria. CHPS Pre-Approved Products simplify the process of identifying, specifying, and documenting building products that meet rigorous health and environmental standards. Pre-Approved Products meet one or more of the following CHPS criteria: Low Emitting Materials, Recycled Content, Certified Wood, Environmental Product Declaration, and/or Material Health Disclosures (HPD and equivalent disclosures).



Collaborative for High Performance Schools
2443 Fair Oaks Blvd. #250, Sacramento, CA 95825
Phone: 415-957-9888 | Email: info@chps.net


Craig Schiller, Executive Director

Certificate v2.1



Architectural Series Flush Wood Door - NAF Particleboard w/ Wood Face Oregon Door

Final Assembly: Winston, Oregon, USA
Life Expectancy: 20 Year(s)
End of Life Options: Take Back Program (Habitat for Humanity)

Ingredients:

Wood (Wood Dust, softwood or hardwood); Wood Dust; Wood Dust, Soft Woods; proprietary (0.7-1%); 4,4'-Methylenediphenyl diisocyanate; Polymethylene polyphenyl isocyanate; Water; Polyvinyl acetate; Polyethylene; Bleach plus Ammonia (Mixture); Slack Wax, Petroleum; Paraffin

¹LBC Temp Exception RL-004b - Proprietary Ingredients in Declare

Living Building Challenge Criteria: Compliant

I-13 Red List:

- ☐ LBC Red List Free % Disclosed: 99% at 100ppm
- ☒ LBC Red List Approved VOC Content: Not Applicable
- ☐ Declared

I-10 Interior Performance: CDPH Standard Method v1.2-2017
I-14 Responsible Sourcing: Product Available with FSC Chain of Custody

ORD-0002
EXP. 01 NOV 2022
Original Issue Date: 2017

MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY
INTERNATIONAL LIVING FUTURE INSTITUTE™ living-future.org/declare

Transparency Documents.....

SCS Global Services does hereby certify that an independent audit has been completed and conformity to the applicable standard(s) has been confirmed for:

Oregon Door Company

477 Dillard Gardens Road, Winston, OR 97406, United States

This single site certificate covers the production of wood doors using the percentage system.

The facility(s) are hereby Chain of Custody certified to sell products as:

FSC Mix

The assessment has been conducted by SCS Global Services in accordance with the protocols of the Forest Stewardship Council® A.C. (FSC®).

FSC Standard: FSC-STD-40-004 V3-0; FSC-STD-50-001 V2-0

Certificate Code: SCS-COC-000588 Trademark License Code: FSC-C012639

Valid from: 28 October 2018 Expiry date: 27 October 2023

This certificate itself does not constitute evidence that a particular product supplied by the certificate holder is FSC-certified (or FSC Controlled Wood where applicable). Products offered, shipped or sold by the certificate holder can only be considered covered by the scope of this certificate when the required FSC claim is clearly stated on sales and delivery documents. The scope of this certificate is considered accurate on the date of issuance. The current validity and scope, including the full list of products, shall be verified on <http://clicb.hsc.org>. The certificate shall remain the property of SCS, and this certificate and all copies or reproductions of this certificate shall be returned to SCS immediately upon request.



The mark of responsible forestry



SCSglobal
SERVICES

Sarah B. Harris

Sarah Harris, Managing Director
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

Form 1.24 Oct 2018



ENVIRONMENTAL CLAIM VALIDATION SUMMARY

Oregon Door

Architectural Series Flush Wood Doors—particleboard core/wood facing

Report Number:

110841-4210

Validation Period:

05/31/2017 - 05/31/2022

Claim:

Product contains an average of 85% pre-consumer recycled content

Method:

Environmental Claim Validation Procedure (ECVP) for Recycled Content, UL 2809 - Fourth Edition

Facility:

Winston OR

© 2019 UL • 2211 Newmarket Parkway, Marietta, GA 30067-9399 USA • T: 888.485.4733 • F: 770.980.0072 • W: ul.com/environment

Transparency Documents....

CERTIFICATE OF COMPLIANCE



Oregon Door

Architectural Series Flush Wood
Doors—particleboard core/wood
facing

110841-410

Certificate Number

10/23/2018 - 05/03/2022

Certificate Period

Certified

Status

UL 2818 - 2013 Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Building materials are determined compliant in accordance with an Office environment with an air change of 0.68 hr⁻¹ and a loading of 1.8g m⁻².
Products tested in accordance with UL 2818 test method to show compliance to emission limits in UL 2818, Section 7.1.



UL investigated representative samples of the Identified Product(s) to the Identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Certificate Holder (collectively "Agreement"). The Certificate Holder is authorized to use the UL Mark for the Identified Product(s) manufactured at the production site(s) covered by the UL Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the Identified dates unless there is non-compliance with the Agreement.

CERTIFICATE OF COMPLIANCE



Oregon Door

Architectural Series Flush Wood
Doors—particleboard core/wood
facing

110841-420

Certificate Number

10/23/2018 - 05/03/2022

Certificate Period

Certified

Status

UL 2818 - 2013 Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Building products and interior finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method Vs. 2-2017 using an Office and Classroom Environment.
Product tested in accordance with UL 2818 test method to show compliance to emission limits on UL 2818, Section 7.1 and 7.2.



UL investigated representative samples of the Identified Product(s) to the Identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Certificate Holder (collectively "Agreement"). The Certificate Holder is authorized to use the UL Mark for the Identified Product(s) manufactured at the production site(s) covered by the UL Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the Identified dates unless there is non-compliance with the Agreement.

Transparency Documents....

Architectural Series Flush Wood Door - Structural Composite Lumber Core w/Wood Face
by Oregon Door

Health Product Declaration v2.2
created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 27058
CLASSIFICATION: 08 14 00 Wood Doors
PRODUCT DESCRIPTION: Structural Composite lumber core w/ wood face

Section 1: Summary Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residue/Impurities	All Substances Above the Threshold Indicated Are:
<input checked="" type="checkbox"/> Nested Materials Method	<input checked="" type="checkbox"/> 100 ppm	Considered in 5 of 5 Materials	Characterized <input type="checkbox"/> Yes Ex/SC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Basic Method	<input type="checkbox"/> 1,000 ppm		% weight and role provided for all substances. <input type="checkbox"/> Yes Ex/SC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Threshold Disclosed Per	<input type="checkbox"/> Per GHS SDS	Explanation(s) provided for Residue/Impurities?	All substances screened using Priority Hazard Lists with results disclosed. <input type="checkbox"/> Yes Ex/SC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Material	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Identified <input type="checkbox"/> Yes Ex/SC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Product			One or more substances not disclosed by Name (Specific or Generic) and Identifier and/or one or more Special Condition did not follow guidance.

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE

STRUCTURAL COMPOSITE LUMBER CORE [WOOD DUST - UNSPECIFIED NoGS POLYMERIC MDI (PMDI) LT-UNK | MUL | RES | CAN | DOOR FACING | WOOD DUST - UNSPECIFIED NoGS SLACK WAX (PETROLEUM) LTP | CAN | MUL AMMONIA LTP | END | MUL | RES | MAM | SKI | AQU | SOL BACKED STILES | WOOD DUST - UNSPECIFIED NoGS POLYMERIC MDI (PMDI) LT-UNK | MUL | RES | CAN PARAFFIN LT-UNK | HOT MELT ADHESIVE | POLYETHYLENE (POST-CONSUMER) LT-UNK | PVA ADHESIVE | WATER BM-4 POLYVINYL ACETATE (PVA) LT-UNK]

Number of Greenscreen BM-4/BM3 contents ... 1
Contents highest concern GreenScreen Benchmark or List translator Score ... LT-1
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:
This HPD is Identified-No given that Wood and Wood Dust don't have registered IDs in Pharos Chemical Library.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT
VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.
VOC emissions: GreenGuard - Gold (previously Children & Schools)
VOC content: GreenGuard - Gold (previously Children & Schools)
Sustainable forestry: SFI Sustainable Forestry Initiative - Certified Chain of Custody (COC)
Other: ILFI Declare - LBC Compliant - Third Party Verified

CONSISTENCY WITH OTHER PROGRAMS
Pre-checked for LEED v4 Material Ingredients Option 1

Third Party Verified?
☐ Yes
☒ No

PREPARED: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2022-01-13
PUBLISHED DATE: 2022-01-13
EXPIRY DATE: 2025-01-13

ENVIRONMENTAL PRODUCT DECLARATION

ARCHITECTURAL WOOD DOOR LEAF

INTERIOR FLUSH DOOR — FIRE-RATED MINERAL CORE, WOOD VENEER FACING

ARCHITECTURAL SERIES: MODELS AW4501, AW4502, AW4503, AW4504, AW6001, AW6002, AW6003, AW6004, AW9001, AW9002, AW9003, AW9004

CRAFTSMAN SERIES: MODELS CS4501, CS4502, CS4503, CS4504, CS6001, CS6002, CS6003, CS6004, CS9001, CS9002, CS9003, CS9004



Shown above: Oregon Door Architectural Series Model AW9004, 30-minute fire-rated mineral core door with plain sliced white maple facing. Manufactured in Winston, Oregon.



OregonDoor
we build the doors that build your reputation

Oregon Door is a leading manufacturer of high-quality architectural flush wood and FRP doors. Headquartered in the Pacific Northwest, the company appreciates the beauty of the region and understands the responsibility a manufacturer must play as a good steward of the environment.

Environmental responsibility is at the heart of Oregon Door's ethos and the company continually strives to be the leader in providing sustainable solutions for all opening needs.

What makes Oregon Door different? In addition to its true commitment to sustainability — an extraordinary line of products, uncommon flexibility, bend over backwards commitment and quick in-house decisions stand out.

Find more information at oregondoor.com.



PARTNERING IN TRANSPARENCY

- Oregon Door partners with our vendors to ensure raw materials are compliant with meeting healthy material's criteria in order to attain transparent documentation.
- Internally Oregon Door is very proud to be a "Green Power Partner" in which the goal is to increase the use of renewable electricity and a proud partner with " Pacific Power Blue Sky" to support renewable energy.
- Our Oregon team works cohesively to take all the steps necessary in promoting an environmentally conscious workplace and ensure that our products meet the strictest green building standards.

Specifying Oregon Door

- Oregon Door is proud to work with AEC's who seek to create a sustainable, safe and healthy building.
- Our Distributor's rely on our expertise when it comes to transparency to ensure that the environmental healthy specification is being met when providing architectural doors for our schools and other commercial buildings.

Further Information

- Visit our website:
- <https://oregondoor.com>
- or
- Catalog Page:
- <http://www.sustainableminds.com>



Opportunities & Challenges for Manufacturers

John Sumlin

Vice President, Tarkett Strategic Sales

john.sumlin@tarkett.com





Opportunities & Challenges for Manufacturers

- Tarkett's commitment: Transparency!!
- Goals: 3rd party verifications, C2C principles
- Opportunities- promote corporate stewardship, robust labels, maintain all Sustainable List servs (Sustainable Minds, etc.)
- Challenges-Singular lines offered, narrow commitments, quality corporate goals, carbon offsets vs. embodied carbon
- Dynamics between the three perspectives
 - labs (verifiers), designers, and manufacturers

Appendix A



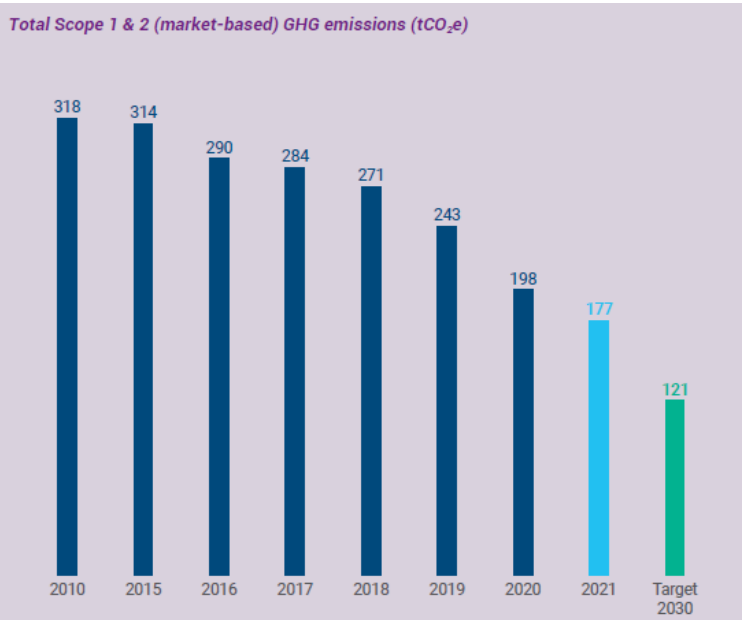
INDOOR AIR QUALITY

99% of flooring solutions have low VOC (volatile organic compounds) emission levels (10 to 100 times lower than the most stringent world standard)



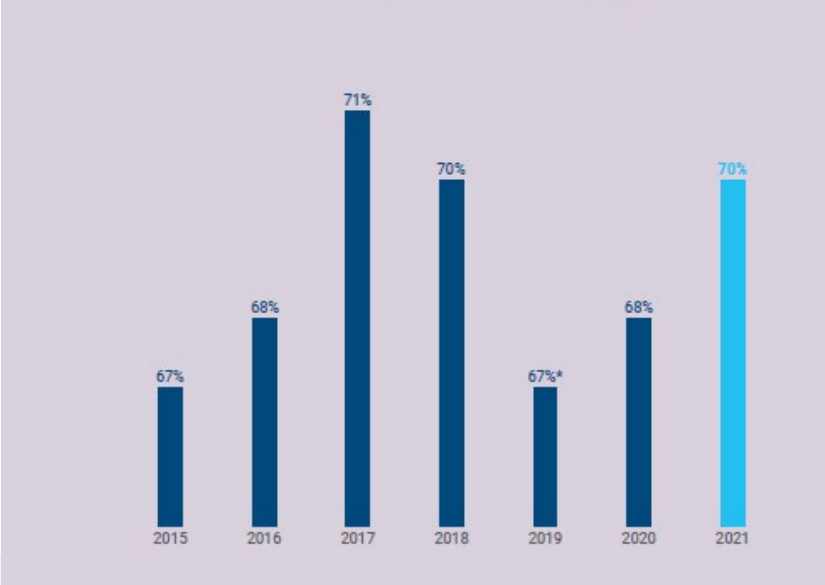
C2C MATERIALS ASSESSMENT

97% of our raw materials are third-party assessed for their impact on people's health and the environment based on Cradle to Cradle® criteria



EcoVadis Sustainability rating: 74/100 – platinum medal
(advanced level, in top 1% of our industry category, highest level of maturity in this rating a company can reach)

Share of raw materials not contributing to resource scarcity (%)





Audience Questions

Please type your questions in Q&A box.





Discussion Question

Manufacturers are investing in human health and materials transparency and still not getting specified or being visible in the market...





For More Information on CHPS

<https://chps.net>

- Studies & reports on high performance schools: <https://chps.net/knowledge-library>
- School Building Science Fridays Webinars: <https://chps.net/school-building-science-fridays>
- Our Criteria for New Construction & Major Renovation: <https://chps.net/chps-criteria>
- Membership info: <https://chps.net/join-us>



Thank you to panelists
John, Gretchen, Patty and Raja.

Thank you all for joining us today!

Visit our School Building Science Fridays webpage for recordings and slides:

<https://chps.net/school-building-science-fridays>

Subscribe to our newsletter for updates on future webinars:

<https://chps.net/healthy-collaboration>