

 Americans spend 87% of their time indoors and an additional 6% in an enclosed vehicle (on average).

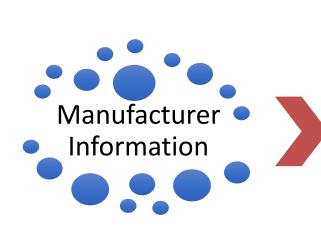
"The finding that emerges is that we are basically an indoor species. In a modern society, total time outdoors is the most insignificant part of the day, often so small that it barely shows up in the total." – W.R. Ott

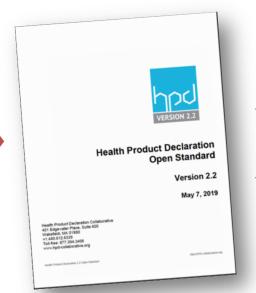


- We are not only what we eat, but what we absorb, inhale, touch....
- What are we making our environments from?
- Government regulation is slow to answer this question.

The push is on: The industry is asking for fully transparent + optimized products











Note: Not an information technology network diagram. Logos represent illustrative examples, not an exhaustive list. Registered Marks are the property of their owners.

# What is the HPD Open Standard?

"Civilization advances by extending the number of important operations which we can perform without thinking about them." – Alfred North Whitehead



# Why is the HPD Open Standard?

- Products are different... so are ecocertifications
- Standardizing data collection protocols gives certifications a standardized data feed to apply their systems to
- Manufacturer costs come down.
- Each label or certification can concentrate on what it does best
- Manufacturers can participate in more programs with more product lines



# An open, voluntary canvas for reporting

• What do you get when you get an HPD?

#### **Nordic X-Lam Health Product** by Nordic Structures Declaration v2.1.1 created via: HPDC Online Builder CLASSIFICATION: 06 17 19 00 Cross-Laminated Timber PRODUCT DESCRIPTION: Nordic X-Lam cross-laminated timber (CLT) is composed of cross-wise Spruce-Pine-Fir (S-P-F) and/or Black Spruce species boards, forming a slab/panel product up to 15 inches thick, 8 feet wide, and 64 feet long. The result is a building material high in resistance and stiffness, that can easily substitute steel or concrete. Section 1: Summary **Nested Method / Product Threshold** CONTENT INVENTORY **Inventory Reporting Format** Threshold level Residuals/Impurities All Substances Above the Threshold Indicated Are-Residuals/Impurities Nested Materials Method C 100 ppm Characterized ○ Yes Ex/SC ○ Yes ○ No Considered in 1 of 4 Materials C Basic Method © 1,000 ppm % weight and role provided for all substances. C Per GHS SDS Threshold Disclosed Per C Per OSHA MSDS ○ Yes Ex/SC Yes No Screened C Material Yes ○ No All substances screened using Priority Hazard Lists with Product results disclosed. Identified C Yes Ex/SC C Yes € No One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow auidance. CONTENT IN DESCENDING ORDER OF QUANTITY Number of Greenscreen BM-4/BM3 contents ... 1 Contents highest concern GreenScreen Summary of product contents and results from screening individual chemical Benchmark or List translator Score ... LT-1 substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this Nanomaterial ... No product will expose individuals to its chemical substances or any health risk. INVENTORY AND SCREENING NOTES Refer to Section 2 for further details. This HPD has been prepared considering a Nested Materials Inventory with a MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY "Per Product" threshold of 1,000 ppm. Wood and all adhesives are Special GREENSCREEN SCORE | HAZARD TYPE Conditions Materials (biological material and reaction products) and are WOOD [ BLACK SPRUCE (BLACK SPRUCE) NoGS ] ADHESIVE #1 [ present in the product, Guidelines for reporting Special Conditions materials POLYURETHANE (POLYURETHANE) LT-UNK POLYMERIC MDI (PMDI) are still under development by HPDC, Nordic Structures will update the HPD (POLYMERIC MDI (PMDI)) LT-UNK | RES | MUL | CAN METHYLENE accordingly once these guidelines get published. BISPHENYL DIISOCYANATE (PURE MDI) (METHYLENE BISPHENYL DIISOCYANATE (PURE MDI)) LT-UNK | MAM | EYE | SKI | CAN | RES | MUL POLYISOCYANATE COMPOUNDS (POLYISOCYANATE COMPOUNDS) NoGS DIPHENYLMETHANE-2,4'- DIISOCYANATE (2,4'-MDI) (DIPHENYLMETHANE-2,4'- DIISOCYANATE (2,4'-MDI )) LT-UNK | MAM | EYE | SKI | CAN | RES | MUL BENTONITE, ACID-LEACHED (BENTONITE ACID-LEACHED) LT-UNK ] ADHESIVE #2 [ STYRENE BUTADIENE RUBBER (SBR) (STYRENE BUTADIENE RUBBER (SBR)) LT-UNK LIMESTONE CALCIUM CARBONATE (LIMESTONE; CALCIUM CARBONATE) LT-UNK WATER (WATER) BM-4 POLYURETHANE (POLYURETHANE) LT-UNK POLY(VINYL ALCOHOL) (POLY(VINYL ALCOHOL)) LT-UNK TOLUENE (TOLUENE) LT-1 | MAM | SKI | DEL | REP | END | MUL | PHY (((CARBOXYMETHYL)IMINO)BIS(ETHYLENENITRILO))TETRAACETIC ACID.

#### What is it?

Nordic X-Lam by Nordic Structures

Health Product Declaration v2.1.1

created via: HPDC Online Builder

LASSIFICATION Up 17 19 00 Cross-Laminated Timber

PRODUCT DESCRIPTION: Nordic X-Lam cross-laminated timber (CLT) is composed of cross-wise Spruce-Pine-Fir (S-P-S) and/or Black Spruce species boards, forming a slab/panel product up to 15 inches thick, 8 feet wide, and 64 feet long. The local time is a building material high in resistance and stiffness, that can easily substitute steel or concrete.



**Section 1: Summary** 

**Nested Method / Product Threshold** 

#### CONTENT INVENTORY

#### Inventory Reporting Format

- Nested Materials Method
- C Basic Method

#### Threshold Disclosed Per

- Material
- Product

#### Threshold level

- C 100 ppm
- O 1,000 ppm O Per GHS SDS
- O Per OSHA MSDS
- C Other

#### Residuals/Impurities

Residuals/Impurities Considered in 1 of 4 Materials

Explanation(s) provided for Residuals/Impurities?

All Substances Above the Threshold Indicated Are:

Characterized C Yes Ex/SC ⊙ Yes C No

% weight and role provided for all substances.

Screened C Yes Ex/SC ⊙ Yes C No

All substances screened using Priority Hazard Lists with results disclosed.

Identified C Yes Ex/SC C Yes ⊙ No

One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.

### What product category?

#### Nordic X-Lam by Nordic Structures

Health Product Declaration v2.1.1

created via: HPDC Online Builder

CLASSIFICATION: 06 17 19 00 Cross-Laminated Timber

LOT DESCRIPTION: Nordic X-Lam cross-luminated timber (CLT) is composed of cross-wise Spruce-Pine-Fir (S-P-F) and/or Black Spruce species boards, forming a slab/panel product up to 15 inches thick, 8 feet wide, and 64 feet long. The result is a building material high in resistance and stiffness, that can easily substitute steel or concrete.



Section 1: Summary

Nested Method / Product Threshold

#### CONTENT INVENTORY

#### Inventory Reporting Format

- Nested Materials Method
- C Basic Method

#### Threshold Disclosed Per

- Material
- Product

#### Threshold level

- C 100 ppm
- € 1,000 ppm C Per GHS SDS
- O Per OSHA MSDS
- C Other

#### Residuals/Impurities

Residuals/Impurities Considered in 1 of 4 Materials

Explanation(s) provided for Residuals/Impurities?

Yes C No.

All Substances Above the Threshold Indicated Are:

○ Yes Ex/SC ○ Yes ○ No Characterized

% weight and role provided for all substances.

○ Yes Ex/SC ○ Yes ○ No. Screened

All substances screened using Priority Hazard Lists with results disclosed.

O Yes Ex/SC O Yes ⊙ No Identified

One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.

#### **Nested or Basic?**

#### Nordic X-Lam by Nordic Structures

Health Product Declaration v2.1.1

created via: HPDC Online Builder

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Section 1: Summary

**Nested Method / Product Threshold** 

#### CONTENT INVENTORY

Inventory Reporting Format

- Nested Materials Method
- C Basic Method

Thresper

- Material
- Product

Threshold level

- 100 ppm
- 1.000 ppm Per GHS SDS
- C Per OSHA MSDS
- C Other

#### Residuals/Impurities

Residuals/Impurities Considered in 1 of 4 Materials

Explanation(s) provided for Residuals/Impurities?

Yes C No.

All Substances Above the Threshold Indicated Are:

Characterized ○ Yes Ex/SC ○ Yes ○ No.

% weight and role provided for all substances.

○ Yes Ex/SC ○ Yes ○ No. Screened

All substances screened using Priority Hazard Lists with results disclosed.

O Yes Ex/SC O Yes ⊙ No Identified

One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.

#### **Nested vs. Basic**

### **Basic Inventory Method:**

 Butter, flour, sugar, eggs, powdered sugar, milk, vanilla



#### **Nested vs. Basic**

### **Basic Inventory:**

 Butter, flour, sugar, eggs, powdered sugar, milk, vanilla

### **Nested Materials Inventory:**

#### Cake:

Butter, flour, sugar, eggs

#### **Frosting:**

Powdered sugar, butter, vanilla, milk



#### Threshold level

#### Nordic X-Lam by Nordic Structures

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created via: HPDC Online Builder

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Section 1: Summary

Nested Method / Product Threshold

#### CONTENT INVENTORY

Inventory Reporting Format

- Nested Materials Method
- C Basic Method

Threshold Disclosed Per

- Material
- Product

#### Threshold level

- C 100 ppm
- 1,000 ppm
- C Per GHS SDS C Per OSHA MSDS
- C Other

#### Residuals/Impurities

Residuals/Impurities Considered in 1 of 4 Materials

Explanation(s) provided for Residuals/Impurities?

Yes C No.

All Substances Above the Threshold Indicated Are:

Characterized ○ Yes Ex/SC ○ Yes ○ No.

% weight and role provided for all substances.

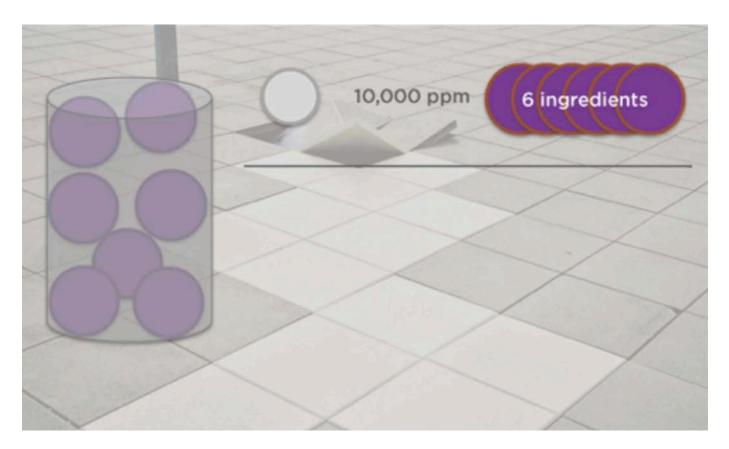
○ Yes Ex/SC ○ Yes ○ No. Screened

All substances screened using Priority Hazard Lists with results disclosed.

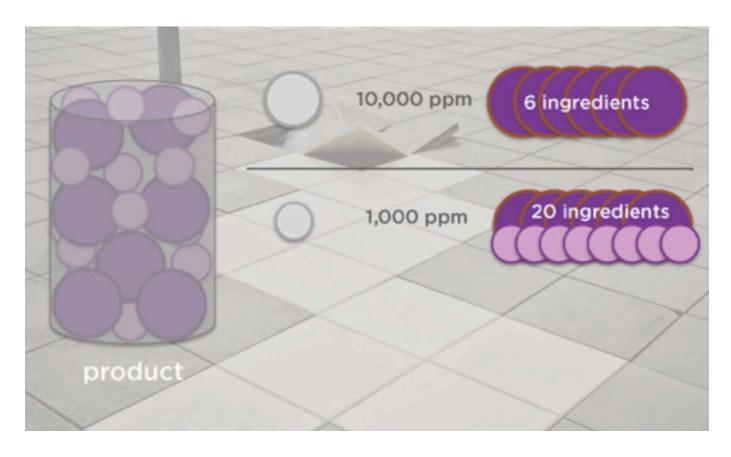
O Yes Ex/SC O Yes ⊙ No Identified

One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.

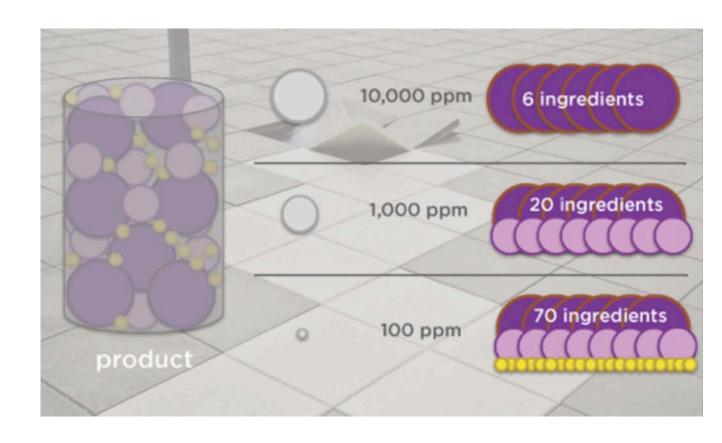
# Why threshold matters



# Why threshold matters



# Why threshold matters



# Why threshold matters

# NOW IMAGINE THE PRODUCT IS A TWINKIE

10,000 ppm



Cake, cream

Inventory

# Why threshold matters

# NOW IMAGINE THE PRODUCT IS A TWINKIE

10,000 ppm



Cake, cream

1,000 ppm



Wheat flour, sugar, corn syrup, niacin, water, high fructose corn syrup, shortening

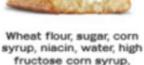
# Why threshold matters

# NOW IMAGINE THE PRODUCT IS A TWINKIE

10,000 ppm



1,000 ppm



shortening

Cake, cream

10,000 ppm = 1% by weight

100 ppm



Enriched Bleached Wheat Flour (Flour, Reduced Iron, BVitamina (Niacin, Thiamine Mononitrate (B1), Riboflavin (B2), Folic Acid)) Corn Syrup, Sugar, High Fructose Corn Syrup, Water, Partially Hydrogenated Vegetable and/or Animal Shortening (Soybean, Cottonseed and/or Canola Oil, Beef Fat). Whole Eggs, Dextrose. Contains 2% or Less of: Modified Corn Starch, Glucose, Leavenings (SodiumAcid Pyrophosphate, Baking Soda, Monocalcium Phosphate), Sweet Dairy Whey, Soy Protein Isolate, Calcium and Sodium Caseinate, Salt, Mono and Diglycerides, Polysorbate 60, Soy Lecithin, Soy Flour, Cornstarch, Cellulose Gum, Sodium Stearoyl Lactylate, Natural and Artificial Flavors, Sorbic Acid (to Retain Freshness), Yellow 5, Red 40.

Inventory

#### Threshold level

#### Nordic X-Lam by Nordic Structures

Health Product Declaration v2.1.1

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CLASSIFICATION: 06 17 19 00 Cross-Laminated Timber

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#### Section 1: Summary

Nested Method / Product Threshold

All Substances Above the Threshold Indicated Are:

#### CONTENT INVENTORY

Inventory Reporting Format

- Nested Materials Method
- C Basic Method

Threshold Disclosed Per

- Material
- Product

#### Threshold level

- C 100 ppm
- 1,000 ppm
- C Per GHS SDS
- C Per OSHA MSDS C Other
- Yes C No.

Residuals/Impurities

Explanation(s) provided

for Residuals/Impurities?

Considered in 1 of 4 Materials

#### Residuals/Impurities

Characterized

○ Yes Ex/SC ○ Yes ○ No.

% weight and role provided for all substances.

○ Yes Ex/SC ○ Yes ○ No. Screened

All substances screened using Priority Hazard Lists with results disclosed.

O Yes Ex/SC O Yes ⊙ No Identified

One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.

# How transparent is it?

### Key indicators:

- Characterized Yes/No
- Screened Yes/No
- Identified Yes?No

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#### **Section 1: Summary**

**Nested Method / Product Threshold** 

#### CONTENT INVENTORY

Inventory Reporting Format

- Nested Materials Method
- C Basic Method

Threshold Disclosed Per

- C Material
- Product

Threshold level

- C 100 ppm
- € 1,000 ppm
- C Per GHS SDS
- C Per OSHA MSDS
- C Other

Residuals/Impurities

Residuals/Impurities Considered in 1 of 4 Material

- Explanation(s) provided for Residuals/Impurities?
- Yes No

AV substances Above the Threshold Indicated Are

Characterized ○ Yes Ex/SC ⊙ Yes ○ No

% weight and role provided for all substances.

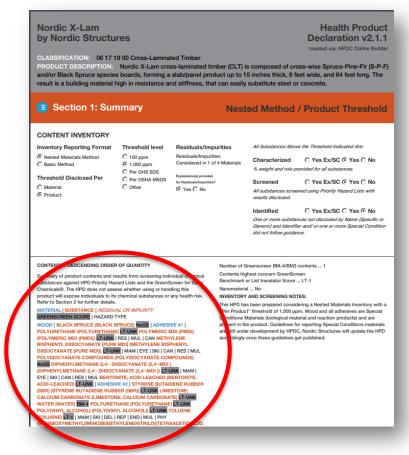
Screened C Yes Ex/SC © Yes C No

All substances screened using Priority Hazard Lists with results disclosed.

Identified C Yes Ex/SC C Yes O No

One or more substances not disclosed by Name (Specific Seneric) and Identifier and/ or one or more Special Condition did not follow guidance.

What's in it, and what are the hazards?



### **Chemical name and CAS RN**

OLUENE (TOLUENE)		ID: 108-8	
HAZARD SCREENING METHOD: Pr	naros Chemicarana Materiale Library	102000 CONSESSIO DATE: 2010-01-20	
%: <b>0.10 - 1.00</b>	GS: <b>LT-1</b>	RC: None NANO: No ROLE: Adhesive component	
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS	
MAMMALIAN	EU - R-phrases	R20 - Harmful by Inhalation (gas or vapor or dust/mist)	
SKIN IRRITATION	EU - R-phrases	R38 - Irritating to skin	
DEVELOPMENTAL	EU - R-phrases	R63 - Possible risk of harm to the unborn child	
DEVELOPMENTAL	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant	
DEVELOPMENTAL	CA EPA - Prop 65	Developmental toxicity	
REPRODUCTIVE	CA EPA - Prop 65	Reproductive Toxicity - Female	

#### **GreenScreen score**

BM-1 = bad, mmkay?

LT-1 = bad

LT-P1 = bad

BM-2 = meh

BM-3 = good

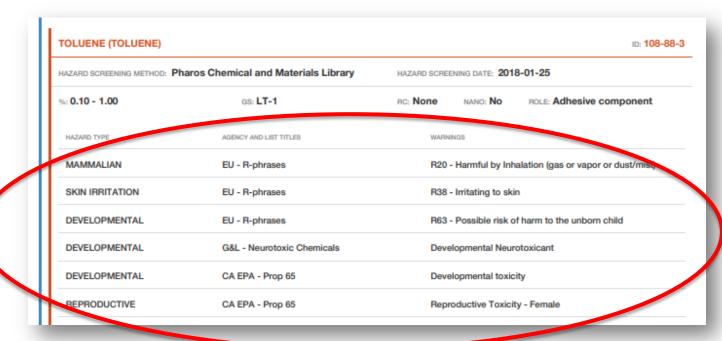
BM-4 = good

TOLUENE (TOLUENE)		
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-01-25
%: 0.10 - 1.00	GS: <b>LT-1</b>	RC: None NANO: No ROLE: Adhesive component
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MAMMALIAN	EU - R-phrases	R20 - Harmful by Inhalation (gas or vapor or dust/mist)
SKIN IRRITATION	EU - R-phrases	R38 - Irritating to skin
DEVELOPMENTAL	EU - R-phrases	R63 - Possible risk of harm to the unborn child
DEVELOPMENTAL	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant
DEVELOPMENTAL	CA EPA - Prop 65	Developmental toxicity
REPRODUCTIVE	CA EPA - Prop 65	Reproductive Toxicity - Female

LT-UNK = ??

NoGS = ??

#### **Hazard lists**





# Perkins&Will











### **Perkins and Will Library Protocol**



Register product(s) in mindful MATERIALS. This informational website is free and open to all manufacturers and building product materials. http://www.origin.build

Provide one form of transparency through mindful MATERIALS or emailed to the local librarian. Acceptable forms of transparency, in order of preference, include:

- Health Product Declaration (HPD) As the preferred method of disclosure, those with HPDs will be given priority when our librarian schedules the Entry Visit.
- Declare Label
- Environmental Product Declaration (EPD) with content disclosure
- Cradle to Cradle Certification
- A disclosure of all materials written on letterhead and signed by a company Executive or Director. Please note, proprietary information can be submitted as 'undisclosed' but the role of the substance, percentage of total material, and Greenscreen Benchmark must be provided.

## 🗗 Label

#### mindful Materials Label



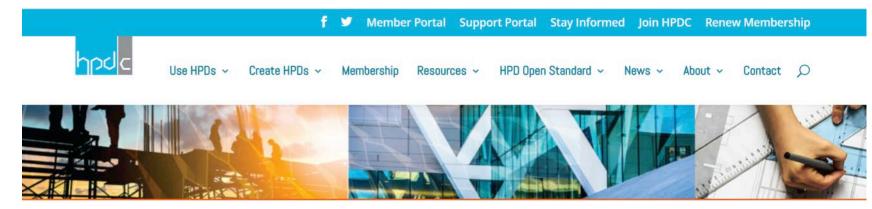
The mindful Materials label will be applied to products which have been registered in mindful Materials and have provided at least one form of transparency.

#### Optimization Label

Optimized products will be identified with color-coded labels. | https:// transparency.perkinswill.com/

- Blue (In Progress)
  - The product vetting is **in progress**. Design professionals should exercise caution when specifying.
- Orange (Grandfathered)
   The product needs further industry development around transparency and optimization (e.g. architectural products).
- Yellow (Good)
  This product has been vetted and does not contain substances on GSPI's Six Classes of Chemicals. | http://www.sixclasses.org/
- Light Green (Better)
  The product has been vetted and does not contain substances on the Perkins and Will Precautionary List. | https://transparency.perkinswill.com/
- Dark Green (Best)
  This product has been vetted and does not contain Greenscreen BM-1,
  LT-1, LTp1 substances. | https://www.greenscreenchemicals.org/method

# The HPD Public Repository





Green Floor GO

Search For Published HPDs: Enter search term and/or click GO

**LEED Reporting Credit** 

#### The building industry's leading open standard

The HPD Open Standard is a standard specification – composed of a format and instructions – for the accurate, reliable and consistent reporting of product contents and associated health information, for products used in the built environment. The HPD Open Standard specification is harmonized with programs of International Living Future Institute, Cradle-to-Cradle Product Innovation Institute, Clean Production Action, BIFMA, LEED, WELL and a growing number of rating and certification standards in the building industry.

Health Product Declaration® (HPD) Collaborative is a not-for-profit, member association with over 200 organizational members, representing the full

#### **Upcoming Events**

**Building Clean 2019** 

November 14th @ Building Clean 2019 Summit How View Full Post

Transparency (Really!) Works: From Specs to Construction

November 20th @

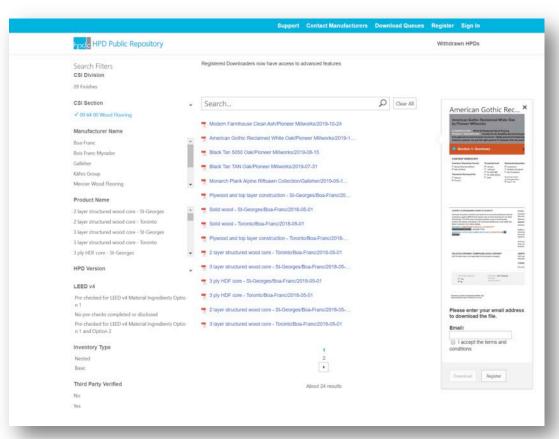
# The HPD Public Repository

#### Key Features of HPD Public Repository

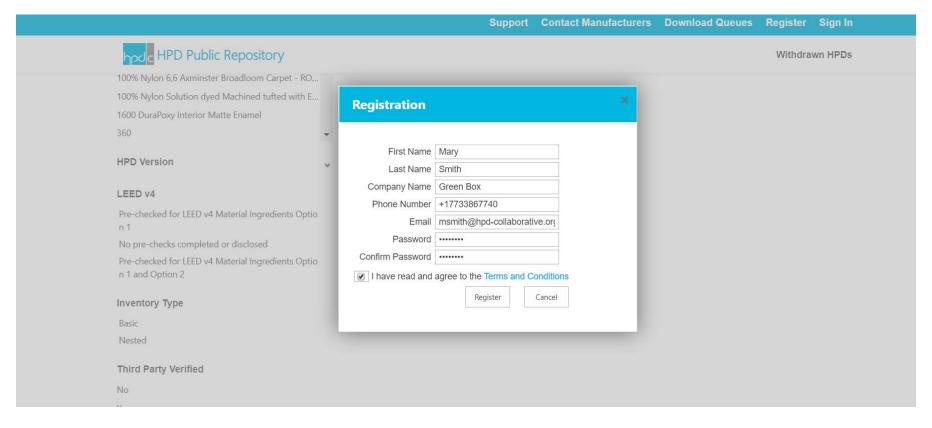
- Holds all published HPDs
- It also feeds them to libraries such as Mindful Materials, Origin, etc.
- Filtered search to find HPDs in key product categories like finishes, furniture, etc.
- Easily "Preview" an HPD before downloading
- "Contact Manufacturers" to directly send an email to a manufacturer to request information
- "Download Queues" allows users to group HPDs for download for a specific project—like a shopping cart



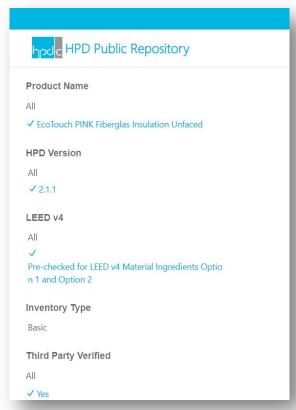
Using the HPD Repository without a registered account



## "Downloader" Account Creation

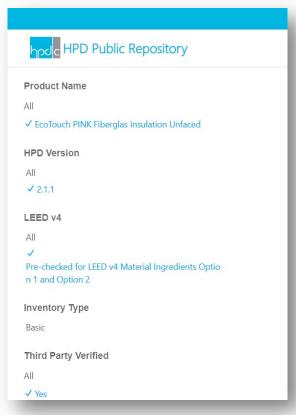


# **Download Queue Creation**

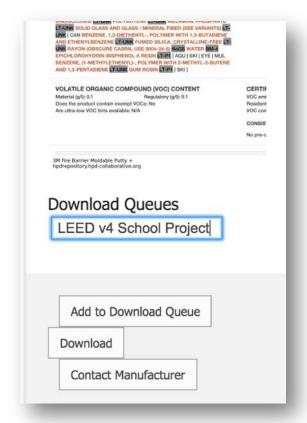


1. Use search filters to find HPDs you want.

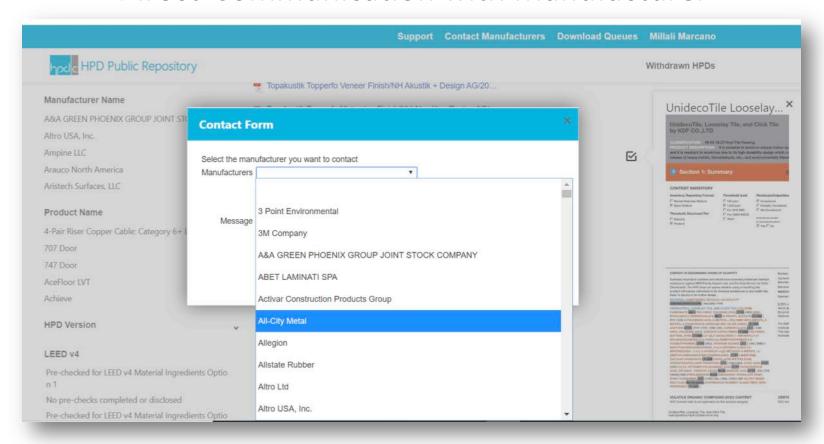
# **Download Queue Creation**



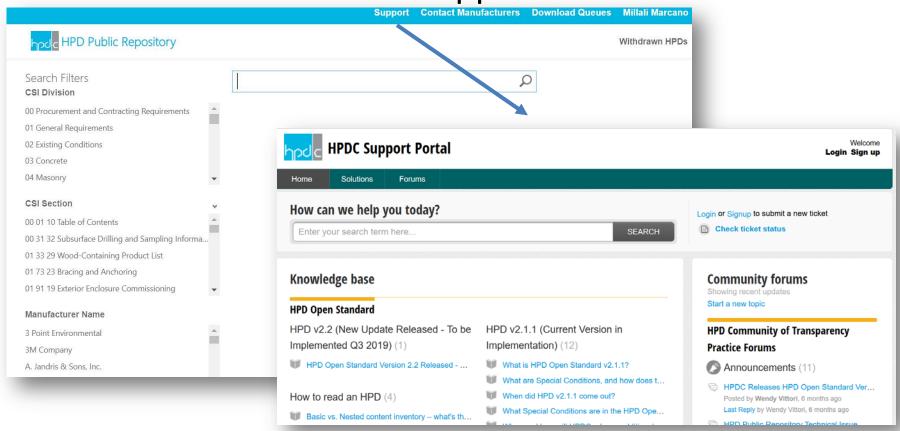
- 1. Use search filters to find HPDs you want.
- 2. Create/add to multiple "download queues."
- Download queues are retained in your Repository account and are editable.
- 4. All HPDs in the download queue can be exported as a single zip file



### Direct Communication with Manufacturer



**User Support** 



Questions? Thank you!

