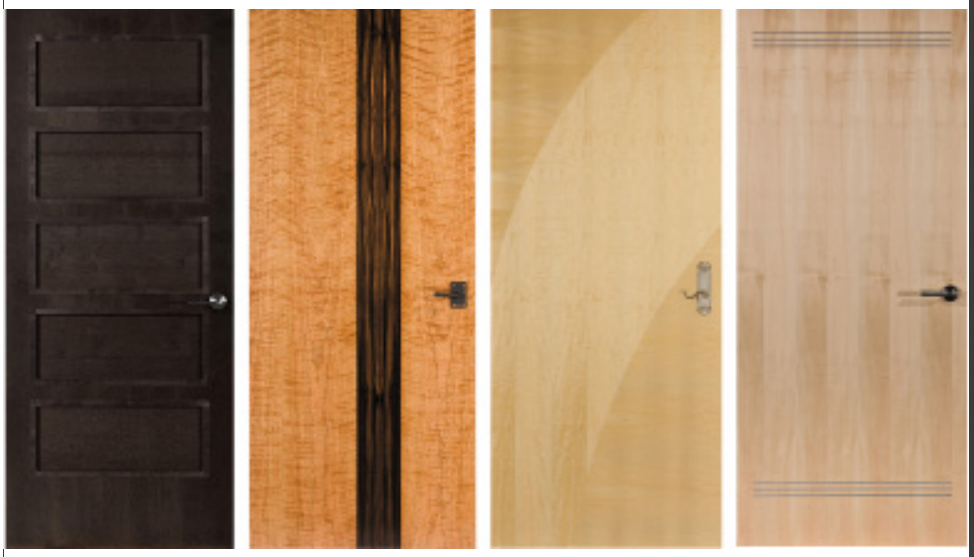
LAMBTON Doors
WOOD DOOR AND JAMB SOLUTIONS

TECHNOLOGY | DESIGN | ENVIRONMENT

ENVIRONMENTAL DATA SHEET



5 PLY DOOR
EnviroDesign™ Series
5-LSL/SCL45

The 5 ply door SCL, with a structural composite lumber core, is an interior wood door of high-quality and with added value developed and manufactured for the high-end residential, commercial, architectural and institutional markets.

VALIDATED ECO-DECLARATION

Product's contribution to LEED® v4

PRODUCT SPECIFICATIONS

References
Structural composite lumber core (SCL):
5-FS/UFLSL-EME/ECE/EBE,
5-FS/UFSCL45-EME/ECE/EBE.

Final manufacturing location
Lambton, Quebec G0M 1H0
CANADA

Composition
Composite core, HDF, SCL, veneer, hardwood edges, adhesives, UV finishes.

ATTRIBUTES

Recycled content
Pre-consumer: 14.3%
Post-consumer: 0%

Sourcing of raw materials
The origin and extraction locations have been documented for 74.6% of raw materials used in manufacturing in the final product, based on weight ratio.

FSC® Certification (When specified) — RA-COC-001082

Rapidly renewable materials — -

Biobased materials — -

ENVIRONMENTAL IMPACTS

Life Cycle Assessment — April 2017

Product's carbon footprint — April 2017

Environmental Product Declaration
Product-specific, Type III
ISO 14025:2006
December 2017 - December 2022

INGREDIENTS AND EMISSIONS

Declaration of chemical ingredients — 1,000 ppm

Type of declaration — HDP® version 2.0 Health Product Declaration®

Emission test — -

VOCs (Factory-applied finishes) — See page 6

Formaldehyde — NAF (Crossband HDF)

Others — CARB Phase 2

TECHNICAL PERFORMANCES

Performance tests
Architectural Woodwork Standards, WDMA Series I.S.1-A, ASTM D5456.

Expected life — 40 years

MANUFACTURER'S ENVIRONMENTAL MANAGEMENT

ISO 14001 Certification — -

Extended Producer Responsibility (Take Back Program) — -

Corporate Sustainability Report (CSR: GRI, ISO 26000, BNQ 21000 or others) — -

CERTIFICATIONS AND CONFORMITIES

FSC www.fsc.org FSC® C001988 The mark of responsible forestry

The FSC® logo enables to indentify products containing wood from forests responsibly managed and certified against the Forest Stewardship Council® standards.

The mission of LAMBTON DOORS is to develop and manufacture high-quality, value-added interior wood doors and frames for the North American commercial, architectural and institutional markets.

235, 2nd Avenue, Lambton, QC G0M 1H0 CANADA
www.lambtondoors.com

MasterFormat®: **08 14 16**
Validated Eco-Declaration:
VED17-1066-03
Original issue date: **2017/08**
Period of validity: **2018/01** to **2019/01**

VERTIMA® VALIDATED ECO-DECLARATION

ENVIRONMENTAL DATA SHEET

DOOR 5-LSL/SCL45 ENVIRODESIGN™

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Thicknesses
44 mm (1-3/4") to 57 mm (2-1/4"); 20 - 45 minutes

Sizes
1219 mm x 3048 mm (48"x120"); positive and neutral pressure (20 minutes)
1219 mm x 2438 mm (48"x96"); positive and neutral pressure (45 minutes)

Options
EDGEFENDER: Impact-resistant door edge protector
ASEPTI: Antimicrobial coated surfaces option

Veneer and edges available in various wood species

ATTRIBUTES

RECYCLED CONTENT

Final product	Weight ratio	Pre-consumer	Post-consumer
Door 5-LSL/SCL45 EnviroDesign™	100%	14.3%	0%
Component (with recycled content)	**Weight ratio**	**Pre-consumer**	**Post-consumer**
HDF	19.1%	75.0%	0%

Validated Eco-Declaration – Recycled Content
Methodology: on-site audit, supply chain evaluation, analysis and validation of the recycled content data according to the weight ratio of each of the components used in manufacturing the final product.
Vertima's procedure: VERT-032008-01, Second Edition.

SOURCING OF RAW MATERIALS

Weight ratio	Final manufacturing location
100%	Lambton, Quebec G0M 1H0 CANADA

Validated Eco-Declaration – Sourcing of raw materials
Methodology: on-site audit, supply chain evaluation, analysis and validation of the sourcing of raw materials data according to the weight ratio of each of the components used in manufacturing the final product.
Vertima's procedure: VERT-032008–02, Second Edition.

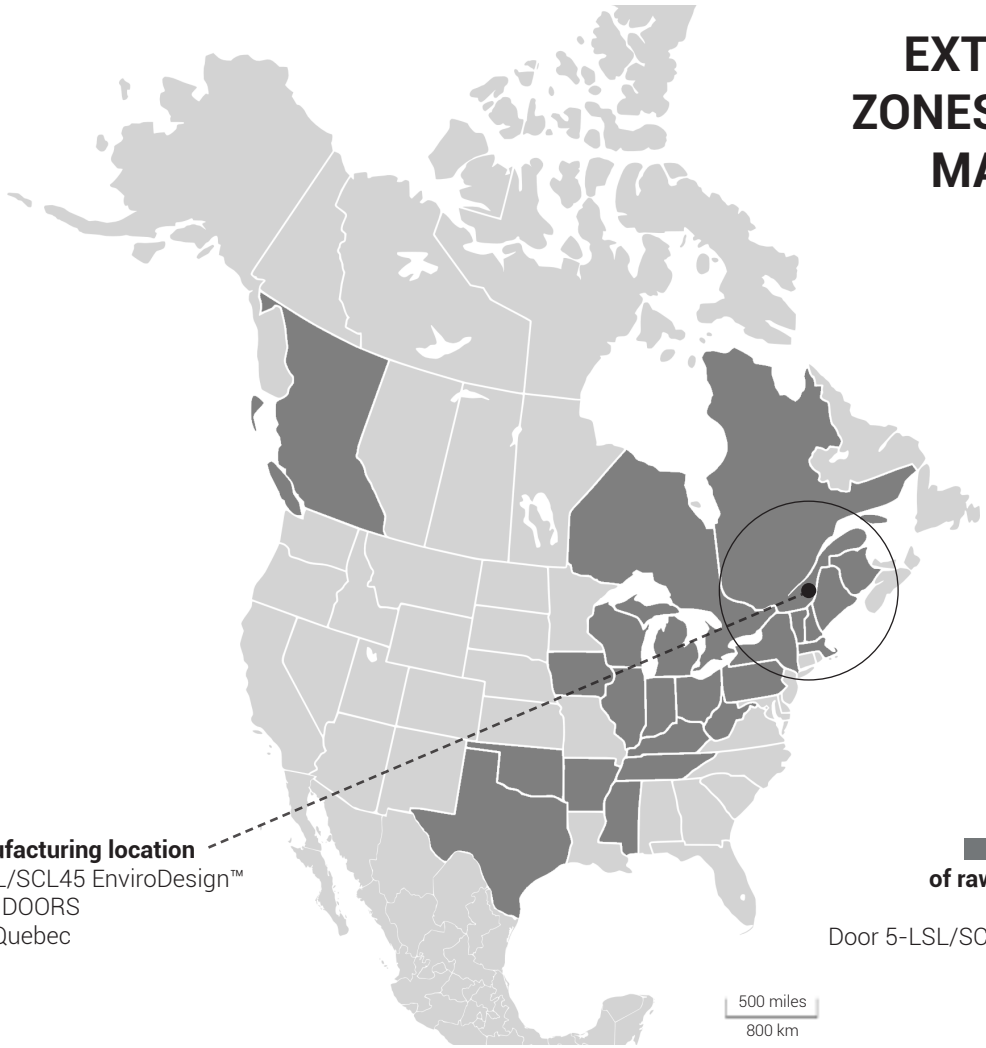
Components	Weight ratio	Extraction locations	Transportation
Composite core, SCL (wood)	50.9%	United States (OK, AR, TX)	Road
Composite core, SCL (other ingredients)	18.8%	N/A	N/A
HDF (wood)	14.3%	United States (WA, ID, MT)	Train, road
HDF (other ingredients)	4.8%	N/A	N/A
Stiles ans rails, SCL (wood)	5.0%	United States (OK, AR, TX)	Road
Stiles ans rails, SCL (other ingredients)	1.8%	N/A	N/A
Veneer	2.3%	Canada, United States, International	Boat, road
Hardwood edges	2.1%	Canada, United States	Road
Adhesives and UV finishes	Negligible	N/A	N/A

The origin and extraction locations have been documented for 74.6% of raw materials used in manufacturing in the final product, based on weight ratio.

Validated Eco-Declaration:
VED17-1066-03
Period of validity:
2018/01 to **2019/01**

ATTRIBUTES (CONTINUED)

SOURCING OF RAW MATERIALS (CONTINUED)



1. **HARVEST LOCATIONS OF WOOD:**

- **COMPOSITE CORE (SCL) - United States:** Oklahoma, Arkansas, Texas.
- **HDF - United States:** Idaho, Montana, Washington.
- **STILES AND RAILS (SCL) - United States:** Oklahoma, Arkansas, Texas.
- **VENEER (Tropical wood) - Africa:** Ghana, Cameroon, Gabon, Congo (not shown on map); **South America:** Brazil (not shown on map).
- **VENEER - Canada:** Ontario, Quebec, British Columbia; **United States:** NY, MI, PA, OH, WV, IN, KY, MS, TN, IA, VT, WI, IL, MA; **Europe:** Croatia, Estonia, Romania, Slovenia, Czech Republic (not shown on map).
- **HARDWOOD EDGES - Canada:** Ontario, Quebec, New Brunswick; **United States:** NY, PA, OH, VT, NH, ME.

Validated Eco-Declaration:
VED17-1066-03
Period of validity:
2018/01 to **2019/01**

ATTRIBUTES (CONTINUED)

FSC® CERTIFICATION

When specified, the EnviroDesign™ door models 5-UFLSL-EME/ECE/EBE and 5-UFSCL45-EME/ECE/EBE are FSC®-Certified. LAMBTON DOORS then refers to the models 5-FSLSL-EME/ECE/EBE and 5-FSSCL45-EME/ECE/EBE.
Contact LAMBTON DOORS for more details.

FSC
www.fsc.org
FSC® C001968
The mark of responsible forestry

Door 5-LSL/SCL45 EnviroDesign™	% Wood components	% FSC®-Certified wood by volume	% calculated according to total volume of wood components used in the product final assembly versus the total volume of FSC®-Certified wood
Wood	100%	75.2%	75.2%
LAMBTON DOORS	**Certification number**	**Type of certification**	**Period of validity**
Lambton, QC CANADA	RA-COC-001082	FSC® MIX	2013/09/20 to 2018/09/19

Validated Eco-Declaration – FSC® Certification
Methodology: on-site audit, supply chain evaluation and validation of FSC® certification documents confirming the type of certification and calculation, based on FSC®-Certified wood weight ratio in the final product.
Vertima's procedure: VERT-032008-03, Second Edition.

ENVIRONMENTAL DATA SHEET

DOOR 5-LSL/SCL45 ENVIRODESIGN™

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ENVIRONMENTAL IMPACTS

ENVIRONMENTAL PRODUCT DECLARATION (EPD)

☑ Product-specific EPD, ISO 14025:2006, Type III

The door models 5-FS/UFLSL-EME/ECE/EBE and 5-FS/UFSCL45-EME/ECE/EBE have EPDs that were prepared by Vertima. FPInnovations is the program operator. The life cycle assessment, verified by a third party and on which is based these EPDs, has been done by the Renewable Materials Research Center (CRMR) of Université Laval, Quebec City (Quebec) in 2014 for LAMBTON DOORS.

Reference PCR	FPInnovations. 2013. Product Category Rules. North American structural and architectural wood products. Version 1.1. 22pp.

Functional Unit (FU)	Scope of the LCA	Reference service life	Period of validity
Closure and separation of 2 rooms with a door of 7 ft x 3 ft (thickness: 1-3/4 in)	Cradle-to-grave	60 years (building) 40 years (product)	December 2017 - December 2022

Table of environmental impacts for the door 5-FS/UFLSL-EME/ECE/EBE and 5-FS/UFSCL45-EME/ECE/EBE (dimensions: 7 ft x 3 ft x 1-3/4 in)

Impact categories	Unit	Results per FU 5-FS/UFLSL-EME/ECE 5-FS/UFSCL45-EME/ECE	Results per FU 5-FS/UFLSL-EBE 5-FS/UFSCL45-EBE
Global warming potential	kg CO_2 eq	2.44	2.46
Ozone depletion potential	kg CFC-11 eq	$1.54.10^{-5}$	$1.54.10^{-5}$
Acidification potential	kg SO_2 eq	0.756	0.756
Smog creation potential	kg O_3 eq	15.6	15.6
Eutrophication potential	kg N eq	1.24	1.24

Consumption of total primary energy	Unit	Results per FU 5-FS/UFLSL-EME/ECE 5-FS/UFSCL45-EME/ECE	Results per FU 5-FS/UFLSL-EBE 5-FS/UFSCL45-EBE
Non-renewable fossil	MJ	2,152	2,152
Non-renewable nuclear	MJ	192.1	192.8

Source: EPD report

Type III Environmental Product Declaration developed in accordance with ISO 14025:2006

Validated Eco-Declaration – Environmental Product Declaration (EPD)
Methodology: validation of documents and methodology surrounding the product LCA report and EPD.
Vertima's procedure: VERT-032010-03, Second Edition.

Validated Eco-Declaration:
VED17-1066-03
Period of validity:
2018/01 to **2019/01**

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DOOR 5-LSL/SCL45 ENVIRODESIGN™

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INGREDIENTS AND EMISSIONS

DECLARATION OF CHEMICAL INGREDIENTS

hpd VERSION 2.0

Type of declaration: Health Product Declaration® (HPD®) version 2.0

Period of validity: November 1st 2016 to November 1st 2019

Summary of product contents and results from screening individual chemical substances against HPD Priority Lists[1] and the GreenScreen for Safer Chemicals®,[2].

Health Product Declaration® URL: http://www.hpd-collaborative.org/hpd-public-repository/

Declaration: Prepared by Vertima ■ Self-declared ☐ Third party

Ingredients inventory threshold: 1,000 ppm

Full disclosure of intentional ingredients: Yes

Full disclosure of known hazards: Yes

Hazards associated with the product ingredients:

This HPD Standard describes a declaration of product content and direct health hazards associated with exposure to its individual contents. The Declaration is not an assessment of risks associated with actual use of the product. It does not address the potential health impacts of substances used or created during manufacture that do not appear in the final product as residuals, nor substances created during combustion or other degradation processes.

Highest concern GreenScreen® Benchmark: List Translator Likely Benchmark 1[3]

☐ PBT (Persitent, Bioaccumulative, Toxic)	■ Respiratory	■ Physical hazard
■ Cancer	☐ Neurotoxicity	☐ Global warming
☐ Gene Mutation	☐ Mammal	☐ Ozone depletion
☐ Development	■ Skin or eye	■ Multiple
☐ Reproductive	■ Aquatic toxicity	☐ Unknown
■ Endocrine	☐ Land toxicity	

[1]Please refer to Annex D of HPD® Open Standard Version 2.0, September 10th 2015. http://www.hpd-collaborative.org

[2]GreenScreen for Safer Chemicals® method: http://www.greenscreenchemicals.org/

[3]GreenScreen (GS) Benchmark scores of chemical ingredients: Benchmark 1 (Avoid, chemical of high concern), Benchmark 2 (Use but search for safer substitutes), Benchmark 3 (Use but still opportunity for improvement), Benchmark 4 (Prefer, safer chemical).

TABLE OF INGREDIENTS

Name	Role	Weight ratio	CAS[1]	GreenScreen®,[2]	Note(s) (for more details refer to the HPD®)
Composite panel	Core	69.7%	9016-87-9 8002-74-2	LT-UNK	-
HDF	Crossband	19.1%	64742-61-6	LT-1	LT-UNK scores also present
SCL	Stiles and rails	6.8%	9016-87-9 8002-74-2	LT-UNK	-
Veneer	Finishing	2.3%	-	-	-
Hardwood edges	Finishing	2.1%	-	-	-
Adhesives	Assembly	0.1% - 1.0%	108-05-4	LT-P1	LT-UNK scores also present
UV finishes	Finishing	0.1% - 1.0%	14808-60-7	LT-1	LT-P1 and LT-UNK scores also present

[1]Only the CAS numbers with the score of highest concern are listed. The complete list of substances can be found in the HPD®.

[2]GS List Translator (LT) scores of chemical ingredients: LT-1, likely GS Benchmark 1; LT-P1, possible GS Benchmark 1; LT-U or LT-UNK, present on GS Specified Lists but there is insufficient information to classify the hazards as LT-1 or LT-P1 (does not mean the chemical is safe).

Validated Eco-Declaration – Declaration of chemical ingredients
Methodology: validation of the documentation confirming the methodology and reporting of chemical ingredients.
Vertima's procedure: VERT-032009–01, Second Edition.

Validated Eco-Declaration:
VED17-1066-03
Period of validity:
2018/01 to **2019/01**

VERTIMA VALIDATED ECO-DECLARATION

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DOOR 5-LSL/SCL45 ENVIRODESIGN™

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INGREDIENTS AND EMISSIONS

VOLATILE ORGANIC COMPOUNDS (VOCs)

All adhesives and finishes are applied during the manufacturing of the 5-LSL/SCL45 EnviroDesign™ Series. In each category of products presented below, the value refers to the VOC content of adhesives and finishes in their liquid state.

ADHESIVES

Manufacturer	Products	VOC content
Dural Division of Multibond Inc.	Different Polyvinyl Acetate (PVAc) based adhesives	1.5 g/L - 24.0 g/L

FINISHES

Manufacturer	Products	VOC content
Can-Lak Inc.	Different UV curable finishes, 100% solid	6.1 g/L - 20.8 g/L

Validated Eco-Declaration – Emissions and Volatile Organic Compounds (VOCs)
Methodology: validation of documents attesting VOCs emissions.
Vertima's procedure: VERT-032009-02, Second Edition.

FORMALDEHYDE

Product Components	Conformity
Composite core	CARB Exempt
Crossband HDF	NAF
Stiles and rails, SCL	CARB Exempt

Validated Eco-Declaration—Emissions and formaldehyde
Methodology: validation of the documents attesting the methodology and results of emissions general evaluation and formaldehyde.
Vertima's procedure: VERT-032009-02, Second Edition.

TECHNICAL PERFORMANCES

PERFORMANCE TESTS

LAMBTON DOORS' products are made in conformance with industrial standards:

- Architectural Woodwork Standards: Standards for fabrication, finishing and installation of architectural woodwork;
- WDMA Series I.S. 1-A: Standard for Windows and Doors Manufacturers;
- ASTM D5456: Standard Specification for Evaluation of Structural Composite Lumber Products;

Fire resistance:

- Up to 45 minutes neutral or positive pressure;
- CAN/ULC S104: Standard Method for Fire Tests of Door Assemblies;
- NFPA 252: Standard Method of Fire Tests of Door Assemblies;
- UL 10B: Standard for Fire Tests of Door Assemblies;
- UL 10C: Standard for Positive Pressure Fire Tests of Door Assemblies (Category B, Category A optional).

Validated Eco-Declaration:
VED17-1066-03
Period of validity:
2018/01 to **2019/01**

TECHNICAL PERFORMANCES (CONTINUED)

WARRANTY

All LAMBTON DOORS wood doors and frames carry a lifetime warranty against warp and show-through.

MANUFACTURER'S ENVIRONMENTAL MANAGEMENT PROGRAM

MANUFACTURER'S COMMITMENT

Since the late 1990s, LAMBTON DOORS has been committed to the environmental movement. We are compelled to act in an eco-friendly way because we believe in a transformed construction industry environment that contributes to a sustainable future. Today, the company's sound environmental management dictates our choice of suppliers, manufacturing process development and equipment acquisition, as well as the treatment of our plant residue. It also explains our use of a sophisticated eco-friendly finishing system that supports the vitality of the environment.

Each of our actions is aimed at preserving the health of our planet and that of our plant workers, field workers and end users. Several of our products, including those in our EnviroDesign™ Series with Ultra-Low Emitting Formaldehyde Resins (ULEF) or No-Added Formaldehyde (NAF), contribute to the points score in various product categories leading to LEED® certification.

Validated Eco-Declaration:
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Period of validity:
2018/01 to **2019/01**

ENVIRONMENTAL DATA SHEET

DOOR 5-LSL/SCL45 ENVIRODESIGN™

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PRODUCT CONTRIBUTION SUMMARY

LEED® v4 requirements for Building Design + Construction (BD+C)

New Construction, Core and Shell, School, Retail, Data Centers, Warehouse and Distribution Centers, Hospitality and Healthcare.

LEED® v4 requirements for Interior Design + Construction (ID+C)

Commercial Interiors, Retail and Hospitality.

MATERIALS AND RESOURCES		PRODUCT CONTRIBUTIONS	
MR	**Building Product Disclosure and Optimization — Environmental Product Declaration (EPD)** Option 1: Environmental Product Declaration (1 point) The door 5-LSL/SCL45 EnviroDesign™ contributes to this credit due to the availability of a product-specific EPD (Type III) and is valued as 1 whole product out of the 20 needed for the purposes of credit achievement calculation.	**Contribute**	**ENVIRONMENTAL IMPACTS** Product-specific EPD (Type III) compliant to ISO 14025:2006. The EPD is based on a cradle-to-grave LCA for a building service life of 60 years. Therefore, it could be used in the calculations for the obtention of credit «MR - Building Life-Cycle Impact Reduction» with Option 4 «Whole-Building Life-Cycle Assessment».
MR	**Building Product Disclosure and Optimization — Sourcing of Raw Materials** Option 2: Leadership extraction practices (1 point) May also contribute to the location valuation factor if the product is sourced (extracted, manufactured, purchased) within 160 km of the project site.	**Contribute**	**ATTRIBUTES** Recycled Content Pre-consumer (14.3%) Post-consumer (0%) FSC® Certification (75.2%) by volume (when specified)
MR	**Building Product Disclosure and Optimization — Material Ingredients** Option 1: Material ingredients reporting (1 point) The door 5-LSL/SCL45 EnviroDesign™ contributes to this credit due to the availability of Health Product Declarations® and is valued as 1 whole product out of the 20 needed for the purposes of credit achievement calculation.	**Contribute**	**INGREDIENTS AND EMISSIONS** HPD® version 2.0 Health Product Declaration®

INDOOR ENVIRONMENTAL QUALITY		PRODUCT CONTRIBUTIONS	
EQ	**Low-Emitting Materials** Option 1: Product category calculation (1 - 3 points) Number of points is dependent on the LEED® rating system and the number of compliant categories.	**Do not contribute**[1]	**INGREDIENTS AND EMISSIONS** [1]Must be tested and determined compliant to the standard method of the California Department of Public Health (CDPH) v1.1-2010. LAMBTON DOORS provides ULEF and/or NAF composite wood panels for EnviroDesign™ doors depending on model.

It is important to consider that the total amount of possible points reflects the number of achievable points in each credit category. The product itself cannot achieve this score, as defined above, but is considered as a beneficial element in order to achieve LEED® credits.

Validated Eco-Declaration:
VED17-1066-03
Period of validity:
2018/01 to **2019/01**

PRODUCT CONTRIBUTION SUMMARY (CONTINUED)

LEED® v4 requirements for homes
Applies to single family homes, multi-family (one to three stories), or multi-family (four to six stories). Includes homes and multifamily low-rise and multi-family mid-rise.

MATERIALS AND RESOURCES		PRODUCT CONTRIBUTIONS	
			ATTRIBUTES
MR Prereq 1	**Certified Tropical Wood**	**Contribute**	The door 5-LSL/SCL45 EnviroDesign™ is available with non-tropical wood species.
			ATTRIBUTES
MR Credit 2	**Environmentally Preferable Products** Maximum of 4 points depending on both options in the context of each project. Option 2: Environmentally Preferable Products [2]The door 5-LSL/SCL45 EnviroDesign™ meets 1 criterion for this option since the product is FSC®-Certified when specified. The final product should contain at least 25% of post-consumer recycled content or 50% of pre-consumer recycled content. Wood products must be FSC®-Certified, or USGBC-approved equivalent.	**Contribute**[2]	Recycled Content Pre-consumer (14.3%) Post-consumer (0%) FSC® Certification (75.2%) by volume (when specified)

INDOOR ENVIRONMENTAL QUALITY		PRODUCT CONTRIBUTIONS	
			INGREDIENTS AND EMISSIONS
EQ Credit 7	**Low-Emitting Products** (0.5 - 3 points) At least 90% of all materials in each category must meet credit requirements.	**Do not contribute**[3]	[3]Must be tested and determined compliant to the standard method of the California Department of Public Health (CDPH) v1.1-2010. LAMBTON DOORS provides ULEF and/or NAF composite wood panels for EnviroDesign™ doors depending on model.

It is important to consider that the total amount of possible points reflects the number of achievable points in each credit category. The product itself cannot achieve this score, as defined above, but is considered as a beneficial element in order to achieve LEED® credits.

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