



Hardwood Floors

ENVIRONMENTAL DATA SHEET






ENGINEERED

(PLYWOOD AND TOP LAYER CONSTRUCTION)

Real wood boards with a hardwood plywood base

VALIDATED ECO-DECLARATION

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PRODUCT SPECIFICATIONS	ENVIRONMENTAL IMPACTS	TECHNICAL PERFORMANCES
Reference Plywood and top layer construction (Engineered)	Life Cycle Assessment (no third party audit) 05/2015	Performance tests Relevant performances tests list. Fire reaction available on request.
Final manufacturing location Saint-Georges, QC G5Y 8J5 or Toronto, ON M8Z 1K8 CANADA	Reference service life -	MANUFACTURER'S ENVIRONMENTAL MANAGEMENT
Components Plywood, wood, adhesives and finishes.	Product's carbon footprint -	ISO 14001 Certification -
ATTRIBUTES	Environmental Product Declaration ISO 14025:2006 -	Extended Producer Responsibility (Take Back Program) -
Recycled Content Pre-consumer: 0% Post-consumer: 0%	INGREDIENTS AND EMISSIONS	Corporate Sustainability Report (CSR : GRI, ISO 26000, BNQ 21000 or others) -
Sourcing of raw materials The source of extraction and/or location of raw materials has been documented for 99.4% of final product weight.	Declaration of chemical ingredients 1,000 ppm	CERTIFICATIONS AND CONFORMITIES
Certified Wood PEFC 54327	Type of declaration HPD® version 2.1 Health Product Declaration®	  
Rapidly renewable materials -	Emission tests Complying with the CDPH	Lacey Act Compliant
Biobased materials -	VOCs CDPH test results ≤ 0.5 mg/m³	
	Formaldehyde CDPH test results ≤ 9.0 ug/m³	
	Others EPA TSCA title VI compliant	

Designed and manufactured in North America, Mirage Floors are synonymous with superior quality, beauty, durability and guarantee product consistency, added value, and lifelong good looks. Mirage epitomizes attention to detail and the desire to create a product in perfect harmony with its environment. For more than 35 years, Mirage has been committed to operating in an environmentally responsible manner in order to ensure sustainable development for current and future generations.

1255, 98th Street, Saint-Georges, QC G5Y 8J5 CANADA
www.miragefloors.com

MasterFormat®: **09 64 00**
 Validated Eco-Declaration: **VED15-0501-01**
 Original issue date: **06/2009**
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PLYWOOD AND TOP LAYER CONSTRUCTION (ENGINEERED)



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Characteristics

- Boards with uniform thicknesses and widths
- Micro-V joint on all four sides of the board
- Radiant heat approved for most species

ATTRIBUTES

RECYCLED CONTENT

Final product	Weight ratio	Pre-consumer	Post-consumer
Plywood and top layer construction (Engineered)	100%	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%	Saint-Georges, QC G5Y 8J5 CANADA or Toronto, ON M8Z 1K8 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.

Component	Weight ratio			Extraction location	Transportation
	3/8" thickness	1/2" thickness	3/4" thickness		
Plywood	62.3%	71.4%	78.4%	Russia and Europe	Boat and road
Wood	37.2%	28.0%	21.0%	Canada and United States	Road
Adhesives	0.3%	0.3%	0.3%	N/A	N/A
Finishes	0.3%	0.3%	0.3%	N/A	N/A

The source of extraction and/or location of raw materials has been documented for 99.4% of final product weight.

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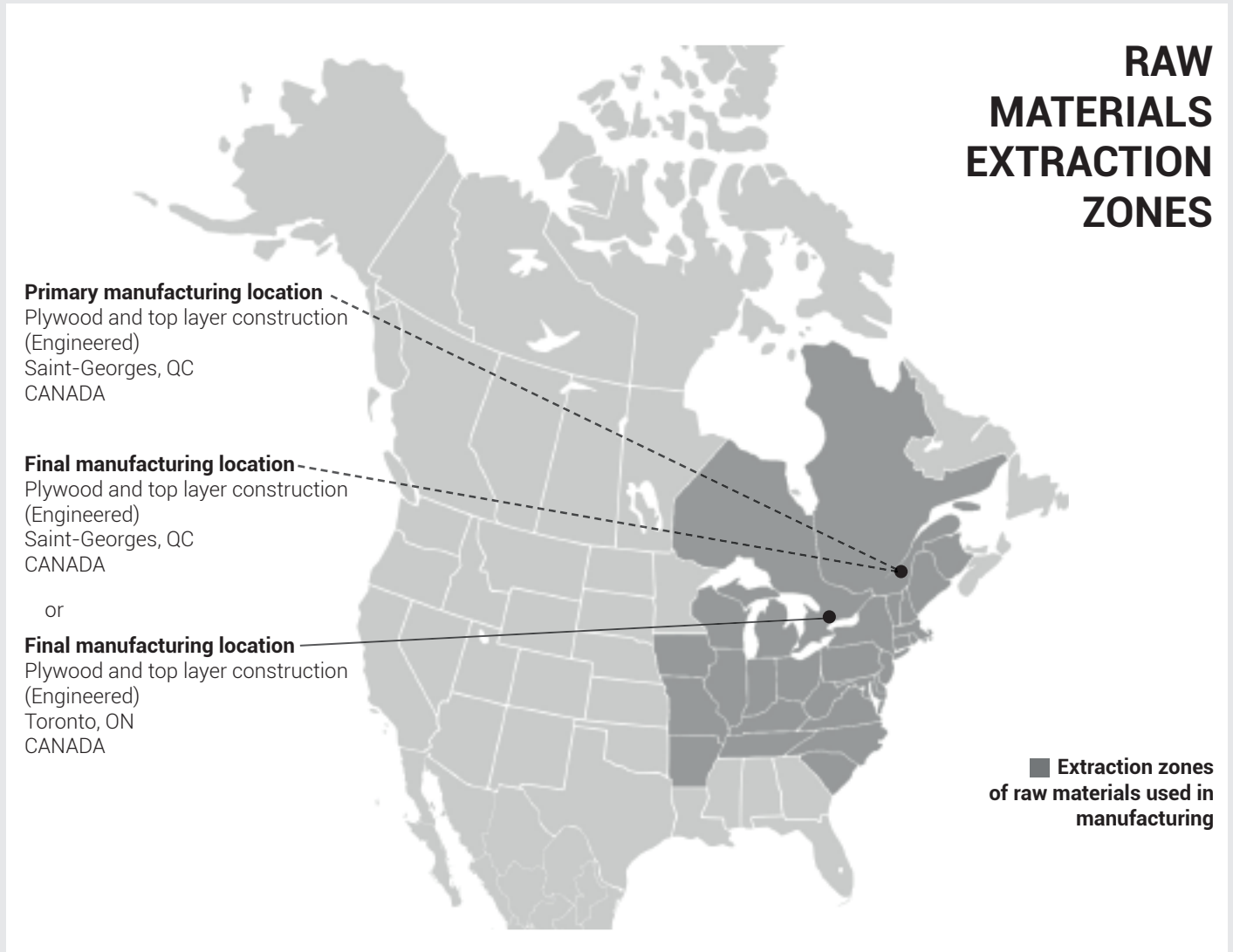
PLYWOOD AND TOP LAYER CONSTRUCTION (ENGINEERED)



Hardwood Floors

ATTRIBUTES (CONTINUED)

SOURCING OF RAW MATERIALS (CONTINUED)



1. MANUFACTURING LOCATIONS OF PLYWOOD (Details available upon request)

Russia and Europe: Not shown on map

2. WOOD HARVEST LOCATION (Details available upon request)

Canada: Quebec, New Brunswick, Ontario.

United States: Arkansas, Connecticut, Delaware, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, Wisconsin.

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ATTRIBUTES (CONTINUED)

CERTIFIED WOOD

When specified, PEFC certified Plywood and top layer construction (Engineered) could be available.
(Contact Mirage for availability)

	Certification agency			Product covered
	Bureau de normalisation du Québec (BNQ)			Wooden floor
	Certified site	Certification number	Traceability method	Period of validity
	BOA-FRANC INC. St-Georges, QC CANADA	54327	Credit system	12/21/2017 to 12/20/2022

Validated Eco-Declaration – Certified wood

Methodology: on-site audit, supply chain evaluation and validation of certified wood documents confirming the type of certification.

Vertima's procedure: VERT-032008-03, Second Edition.

ENVIRONMENTAL IMPACTS

LIFE CYCLE ASSESSMENT (LCA)

Only applicable for Plywood and top layer construction products prefinished at Saint-Georges plant, Quebec.

In collaboration with Ellio and Vertima, Boa-Franc conducted a life cycle analysis (LCA) for its product, plywood and top layer construction. The LCA has been done in compliance with ISO 14040 methodology but without external verification, which does not allow for the results publication.

The purpose of Boa-Franc preliminary step was to better understand and identify the main environmental impacts associated with plywood and top layer constructions, and to thereby calculate the product carbon footprint.

Boa-Franc is currently taking action to develop its commitment to the environment and product transparency, and is available to answer any questions regarding the potential environmental impacts of plywood and top layer constructions.

Validated Eco-Declaration—Life Cycle Assessment (LCA)

Methodology: LCA conducted according to ISO 14040-2006 and 14044 – 2006. No third party audit has been conducted.

Vertima's procedure: VERT-032010-03, Second Edition.

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INGREDIENTS AND EMISSIONS

DECLARATION OF CHEMICAL INGREDIENTS



VERSION 2.1

Type of declaration: Health Product Declaration® (HPD®) version 2.1

Period of validity: May 2018 to November 2020

HPD name: Plywood and top layer construction - St-Georges

Summary of product contents and results from screening individual chemical substances against HPD Priority Lists¹ and the GreenScreen for Safer Chemicals®².

HPDC repository URL: <http://www.hpd-collaborative.org/hpd-public-repository/>

The presented results are specific to Plywood and top layer construction prefinished at St-Georges plant. For more details about the HPD® related to Plywood and top layer construction prefinished at Toronto plant and entitled "Plywood and top layer construction - Toronto", please consult the HPD Public repository.

The Health Product Declaration® and logo is owned by the Health Product Declaration® Collaborative and is used with permission.

Declaration: ■ Prepared by Vertima inc., third party approved by HPDC

Ingredients inventory threshold: 1,000 ppm

Full disclosure of intentional ingredients: Yes

Full disclosure of known hazards: Yes

Hazard(s) associated with the product ingredients: (Not associated with actual use of finished product)

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: Benchmark 1³

- | | | |
|---|--|---|
| <input type="checkbox"/> PBT (Persistent, Bioaccumulative, Toxic) | <input checked="" type="checkbox"/> Respiratory | <input checked="" type="checkbox"/> Physical hazard |
| <input checked="" type="checkbox"/> Cancer | <input type="checkbox"/> Neurotoxicity | <input type="checkbox"/> Global warming |
| <input type="checkbox"/> Gene mutation | <input checked="" type="checkbox"/> Mammal | <input type="checkbox"/> Ozone depletion |
| <input checked="" type="checkbox"/> Development | <input type="checkbox"/> Land toxicity | <input checked="" type="checkbox"/> Multiple |
| <input checked="" type="checkbox"/> Reproductive | <input checked="" type="checkbox"/> Aquatic toxicity | <input type="checkbox"/> Unknown |
| <input checked="" type="checkbox"/> Endocrine | <input checked="" type="checkbox"/> Skin or eye | |

¹Refer to Annex D of HPD® Open Standard Version 2.1, May 2017: <http://www.hpd-collaborative.org>

²GreenScreen for Safer Chemicals® method: <http://www.greenscreenchemicals.org/>

³GreenScreen (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 - 3 thickness : 3/8" - 1/2" - 3/4"

Component	Role	Weight ratio	CAS ¹	GreenScreen® ²	Other applicable score (for more details refer to the HPD®)
Plywood	Main element	62.3% - 78.4%	9003-35-4	LT-P1	BM-3 and BM-4 scores also present
Wood	Main element	21.0% - 37.2%	-	-	-
Adhesives	Assembly	0.3%	1333-86-4	LT-1	LT-P1 and LT-UNK scores also present
Finishes	Finishes	0.3%	14807-96-6 1330-20-7	BM-1	LT-1, LT-P1, LT-UNK, BM-2 and BM-4 scores also present

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

²GS 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.

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INGREDIENTS AND EMISSIONS (CONTINUED)

EMISSION TESTS

Reference Standard



California Department of Public Health CDPH/EHLB/Standard Method Version 1.1, 2010
(Emission testing method for CA Specification 01350)

Certificate number: 150224-02

Issue Date: February 24, 2015

Final manufacturing location: St-Georges, QC

Analytical Lab: Berkeley Analytical

Acceptance Criteria and Results Demonstrating Compliance of Product Sample to Referenced Standard:

Exposure Scenario ¹	Individual VOCs of Concern ²		Formaldehyde ³		TVOC ⁴
	Criterion	Compliant	Criterion	Compliant	Range
School Classroom	≤½ Chronic REL	Yes	≤9.0 µg/m ³	Yes	≤0.5 mg/m ³
Private Office	≤½ Chronic REL	Yes	≤9.0 µg/m ³	Yes	≤0.5 mg/m ³
Single Family Residence (if applicable)	≤½ Chronic REL	Yes	≤9.0 µg/m ³	Yes	≤0.5 mg/m ³

Product Coverage⁵: Not applicable

Source: Berkeley Analytical - VOC Emission Test Certificate

Reference Standard



California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017
(Emission testing method for CA Specification 01350)

Certificate number: 171017-02

Issue Date: October 17, 2017

Final manufacturing location: Toronto, ON

Analytical Lab: Berkeley Analytical

Acceptance Criteria and Results Demonstrating Compliance of Product Sample to Referenced Standard:

Exposure Scenario ¹	Individual VOCs of Concern ²		Formaldehyde ³		TVOC ⁴
	Criterion	Compliant	Criterion	Compliant	Range
School Classroom	≤½ Chronic REL	Yes	≤9.0 µg/m ³	Yes	≤0.5 mg/m ³
Private Office	≤½ Chronic REL	Yes	≤9.0 µg/m ³	Yes	≤0.5 mg/m ³

Product Coverage⁵: Not applicable

Source: Berkeley Analytical - VOC Emission Test Certificate

¹Exposure scenarios & product quantities for classroom & office are defined in Tables 4-2 – 4-5 (CDPH Std. Mtd. V1.1-2010 or V1.2-2017).

²Maximum allowable concentrations of individual target VOCs are specified in Table 4-1 (ibid).

³Maximum allowable formaldehyde concentration is ≤9 µg/m³, effective Jan 1, 2012; previous limit was ≤16.5 µg/m³ (ibid).

⁴Informative only; predicted TVOC Range in three categories, i.e., ≤0.5 mg/m³, >0.5 – 4.9 mg/m³, and ≥5.0 mg/m³.

⁵Informative and applicable only to tests of wet-applied products; grams of sample applied per square meter of substrate.

Validated Eco-Declaration—Emissions testing

Methodology: validation of documents certifying the test results.

Vertima's procedure: VERT-032009-02, Second Edition.

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INGREDIENTS AND EMISSIONS (CONTINUED)

EPA TSCA TITLE VI COMPLIANT

EPA
TSCA title VI
Compliant

The product meets EPA TSCA title VI criterias. Contact manufacturer for more details.

TECHNICAL PERFORMANCES

PERFORMANCE TESTS

Contact manufacturer for more details.

WARRANTY

See product detailed description.

MANUFACTURER'S ENVIRONMENTAL MANAGEMENT PROGRAM

RESPONSIBLE RAW MATERIALS PROCUREMENT REPORT

Report name	Date
Controlled Wood Risk Evaluation	Updated annually

Lacey Act
Compliant

Validated Eco-Declaration - Supply Chain Management Report
Methodology: validation of documents attesting the supply chain management report.
Vertima's procedure: VERT-032009-04, First Edition.



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PRODUCT CONTRIBUTION SUMMARY

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

New Construction and Major Renovation, 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 – Sourcing of Raw Materials Option 2: Leadership extraction practices (1 point) See Pilot-Credits MRpc102: Legal Wood	Contribute (pilot-credits)	ATTRIBUTES
			PEFC Certification (when specified)
MR	Building Product Disclosure and Optimization – Material Ingredients Option 1: Material ingredients reporting (1 point) The Plywood and top layer construction (Engineered) 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 2.1 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. For the flooring category 100% of flooring must meet the requirements.	Contribute	INGREDIENTS AND EMISSIONS
			The Plywood and top layer construction (Engineered) has been tested according with the standard method of the California Department of Public Health (CDPH).

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	
MR Prerequisite	Certified Tropical Wood	-	ATTRIBUTES
			To meet the prerequisite, don't select tropical species of Mirage.
MR	Environmentally Preferable Products Maximum of 4 points depending on both options in the context of each project. Option 2: Environmentally Preferable Products Wood products must be FSC®-Certified, or USGBC-approved equivalent. See Pilot-Credits MRpc102: Legal Wood	Contribute (pilot-credits)	ATTRIBUTES
			PEFC Certification (when specified)
INDOOR ENVIRONMENTAL QUALITY		PRODUCT CONTRIBUTIONS	
EQ	Low-Emitting Products (0.5-3 points) At least 90% of all materials in each category must meet credit requirements.	Contribute	INGREDIENTS AND EMISSIONS
			The Plywood and top layer construction (Engineered) has been tested according with the standard method of the California Department of Public Health (CDPH).

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 obtain LEED® credits.

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