



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 54327-1-01 | 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 ULEF/CARB 93120 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**
 Period of validity: **02/2018 to 02/2019**



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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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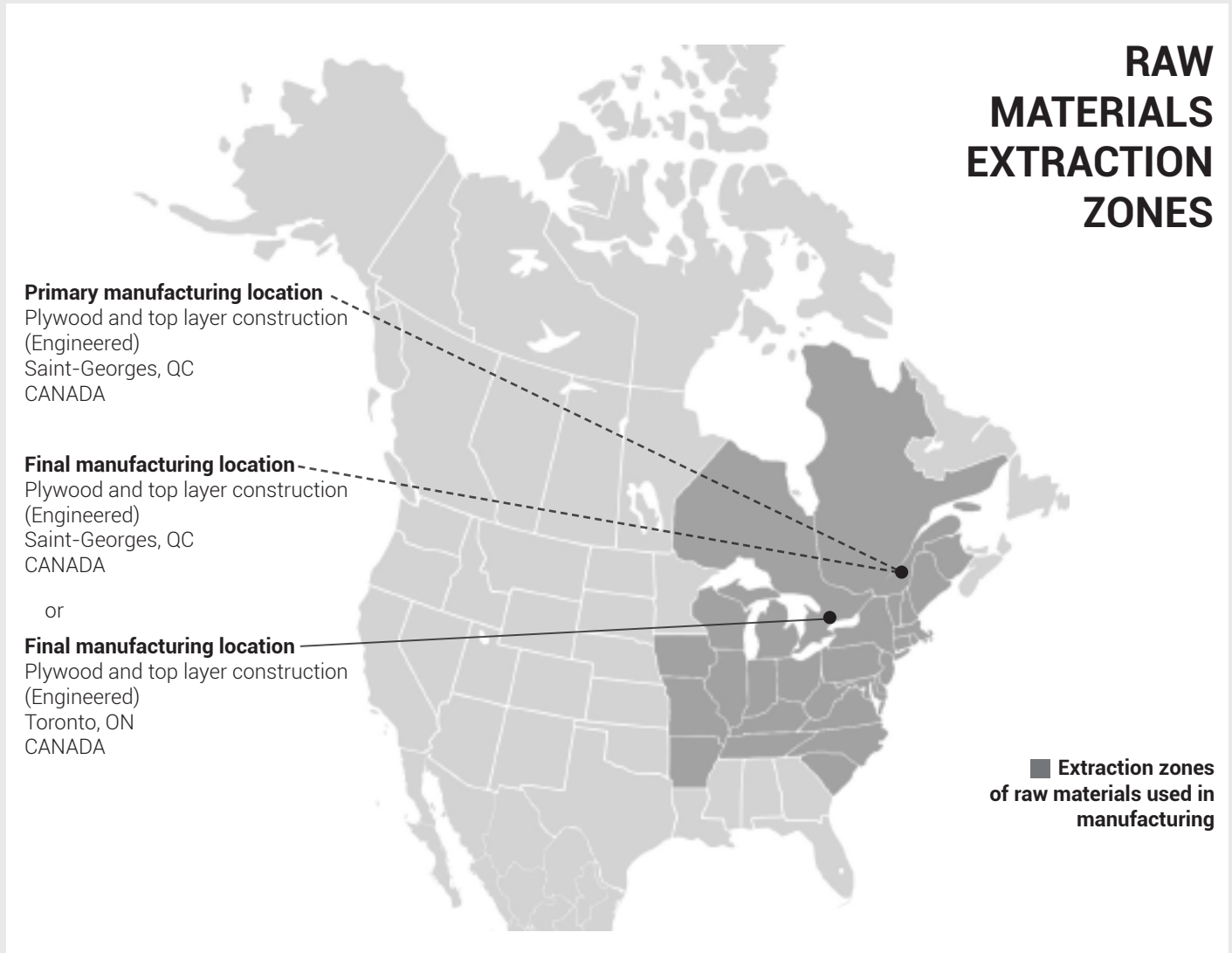
PLYWOOD AND TOP LAYER CONSTRUCTION (ENGINEERED)



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 | 54327-1-01 | 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.



ENVIRONMENTAL DATA SHEET

PLYWOOD AND TOP LAYER CONSTRUCTION (ENGINEERED)



Hardwood Floors

INGREDIENTS AND EMISSIONS

DECLARATION OF CHEMICAL INGREDIENTS



VERSION 2.1

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

Period of validity: February 2018 to February 2021

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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Hardwood Floors

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)

CARB COMPLIANT

CARB
93120
Compliant

The product meets CARB 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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Hardwood Floors

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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