



PARTICLEBOARD

Uniboard's particleboard stands out from the competition, thanks to its specially bonded, top-quality wood fibers, its smooth surface and exceptional machining ease, making it the ideal choice for commercial and residential applications. Manufactured at our state-of-the-art facilities across North America, Uniboard's particleboard is the perfect choice for designers, architects and manufacturers.

VALIDATED ECO-DECLARATION

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PRODUCT SPECIFICATIONS	ENVIRONMENTAL IMPACTS	TECHNICAL PERFORMANCES
References Particleboard laminated or not laminated	Life Cycle Assessment -	Performance tests ANSI A208.1-2016/ASTM E84
Final manufacturing location Sayabec, Quebec G0J 3K0 Val-d'Or, Quebec J9P 5G6 CANADA	Reference service life -	MANUFACTURER'S ENVIRONMENTAL MANAGEMENT
Components Wood particles, resin, water, scavenger, catalyst, wax and melamine-cellulose	Product's carbon footprint -	
ATTRIBUTES	Environmental Product Declaration Industry-wide (generic) (Déc. 2018 to Nov. 2023) ISO 14025:2006, Type III The EPD excludes the laminated product.	Certification ISO 14001 -
	Recycled Content Pre-consumer: 83.7% - 86.5% Post-consumer: 0%	INGREDIENTS AND EMISSIONS
Sourcing of raw materials The origin and extraction location of raw materials have been documented for 83.7% - 86.5% of the final product weight ratio.	Declaration of chemical ingredients 100 ppm	CERTIFICATIONS AND CONFORMITIES
Certified Wood NC-COC-002726	Type of declaration HPD® version 2.1.1 Health Product Declaration®	
Rapidly renewable materials -	Emission test -	  
Biobased materials -	COV -	
	Formaldehyde ≤ 0.09 ppm	
	Others TSCA Title VI compliant	

Uniboard Canada Inc. is a leading North American manufacturer of engineered wood products, with installed capacity of over 660 million square feet of raw particleboard, high-density and medium-density fiberboard, of which over 50% is converted into value-added TFL.

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ENVIRONMENTAL DATA SHEET

PARTICLEBOARD



Uniboard® uses premium quality wood fibers bonded with a high performance resin made in Quebec. Its smooth, dense and non porous surface makes it ideal for laminating and machining. Uniboard particleboard cuts easily and cleanly without chipping, a significant advantage that optimizes production time and minimizes waste.

ATTRIBUTES

RECYCLED CONTENT

Components	Weight ratio	Pre-consumer	Post-consumer
Wood particles	83.7% - 86.5%	100%	0%
Final product	Weight ratio	Pre-consumer	Post-consumer
Particleboard	100%	83.7% - 86.5%	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 the manufacturing the final product.

Vertima's procedure: VERT-032008-01, Second Edition.

SOURCING OF RAW MATERIALS

Weight ratio	Final manufacturing location
100%	Sayabec, (Quebec) G0J 3K0 CANADA Val-d'Or, (Quebec) J9P 5G6

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	Location of suppliers	Extraction location	Transport from suppliers
Wood particules	83.7% - 86.5%	N/A	QC, ON and North-East of the United-States	Road
UF resin	7.6% - 7.9%	N/A	N/A	N/A
Water	4.5% - 4.6%	N/A	N/A	N/A
Others	1.0%	N/A	N/A	N/A
Melamine-Cellulose	0.0% - 3.2%	N/A	N/A	N/A

The origin and extraction location of raw materials have been documented for 83.7% - 86.5% of the final product weight ratio.

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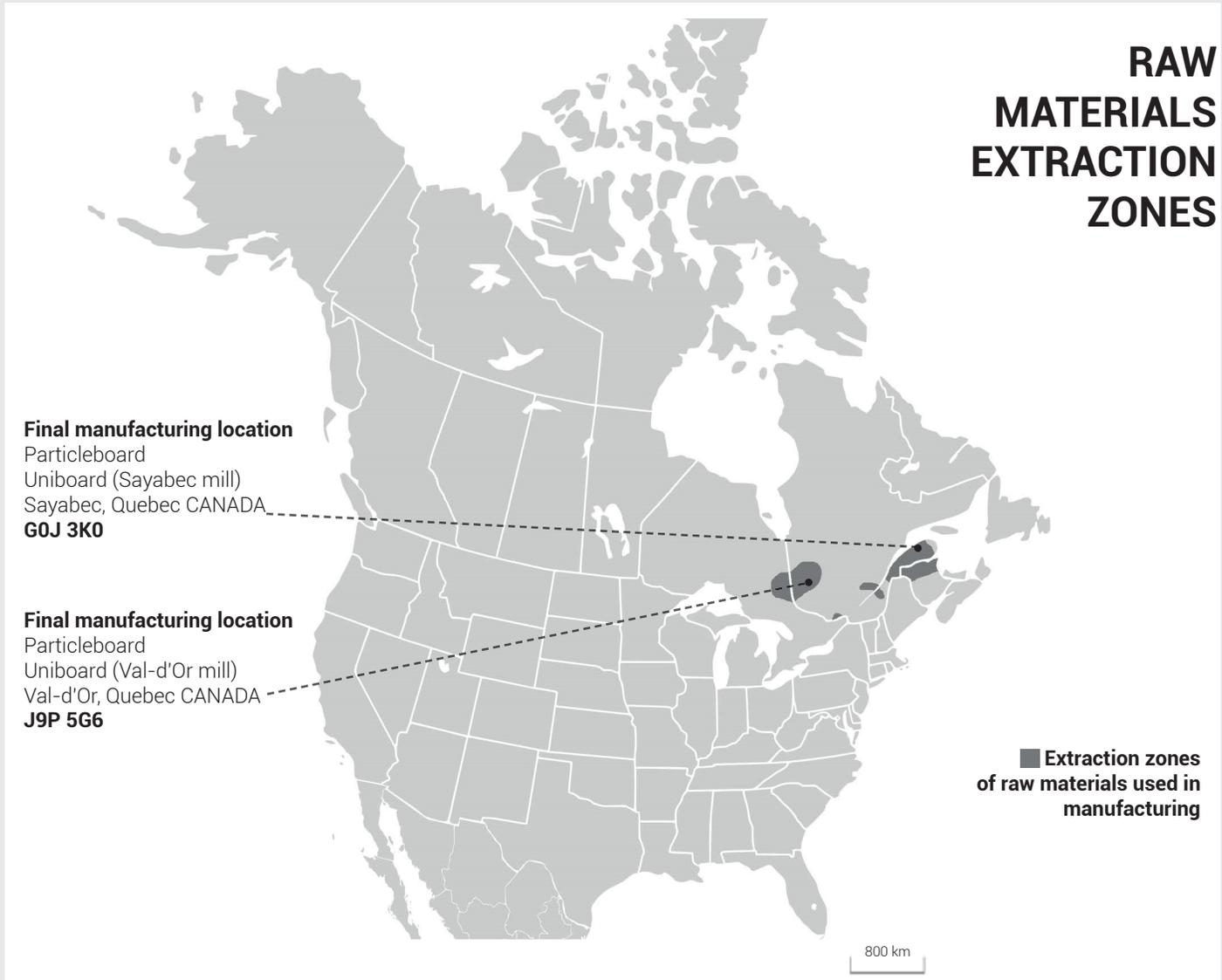
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ATTRIBUTES (CONTINUED)

SOURCING OF RAW MATERIALS (CONTINUED)

RAW MATERIALS EXTRACTION ZONES



HARVEST LOCATIONS OF WOOD FIBERS : (Details available upon request)
Canada (Quebec, New Brunswick and Ontario) and North East of the United States

ATTRIBUTES (CONTINUED)

FSC® CERTIFICATION

FSC® Certified Particleboard (When specified)



Particleboard	% Wood component	% FSC® - certified Wood	Total % FSC® - Certified wood used in the final assembly of the product versus the total weight of the wood components (based on weight ratio)	
Wood particles	83.7% - 86.5%	83.7% - 86.5%	100%	
Uniboard mills		Certification number	Certification agency	Period of validity
Sayabec, (Quebec) G0J 3K0 CANADA Val-d'Or, (Quebec) J9P 5G6 CANADA		NC-COC-002726	FSC controlled wood, FSC Mix	11/6/2017 to 11/05/2022

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 IMPACTS

ENVIRONMENTAL PRODUCT DECLARATION (EPD)

Industry-wide (generic), ISO 14025:2006, Type III

In 2018, Uniboard collaborated to the update of the generic Environmental Product Declaration for Particleboard production by providing its Particleboard production data of the Val-d'Or et Sayabec plants. The project was lead by the Composite Panel Association (CPA) and audited by UL Environnement, the program operator. **The EPD excludes the laminated product.**

Reference PCR	FPInnovations: 2015. Product Category Rules (PCR) for preparing an Environmental Product Declaration for North American Structural and Architectural Wood Products. Version 2 (UN CPC 31, NAICS 321), June 18, 2015.
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Functional Unit	Scope of the LCA	Reference service life	Period of validity
1m ³ of particleboard	Cradle-to-gate	N/A	12/2018 to 11/2023

Table 2: Cradle-to-Gate- Impact Assessment Result - 1m³ North American Particleboard

Impact categories	Unit	Per m ³ of Particleboard includes forestry operations
Global warming potential	kg CO ₂ eq.	402.61
Ozone depletion potential	kg CFC-11 eq.	3.41E-05
Acidification potential	kg SO ₂ eq.	3.88
Smog creation potential	kg O ₃ eq.	46.37
Eutrophisation potential	kg N eq.	1.23
Total consumption primary energy	Unit	Per m ³ of Particleboard includes forestry operations
Non-renewable fossil	MJ	5 938.15
Non-renewable nuclear	MJ	633.91

The EPD includes Life Cycle Assessment (LCA) results for all processes up to the point that particleboard is packaged and ready for shipment at the manufacturing gate. The life cycle of particleboard includes the production of wood residues that are a coproduct of lumber milling. The cradle-to-gate product system thus includes forest management, logging, transportation of logs to lumber mills, sawing, transportation of wood residues to particleboard plants, and particleboard production.

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.

Source: EPD report



INGREDIENTS AND EMISSIONS

DECLARATION OF CHEMICAL INGREDIENTS



Type of declaration: Health Product Declaration® (HPD®) version 2.1.1

Period of validity: July 15, 2019 to July 15 2022

The content of Uniboard Particleboard was assessed for health hazard warnings as required using Pharos¹.

HPDC repository URL: <http://www.hpd-collaborative.org/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: 100 ppm

Full disclosure of intentional ingredients: Yes

Full disclosure of known hazards: Yes

Hazard(s) associated with the product ingredients:

Contents in Descending Order of Quantity

Wood dust - unspecified, Formaldehyde compounds, Urea formaldehyde based, Water, Urea, Slack Wax (petroleum), Ammonium sulfate, Formaldehyde, Paraffin oil.

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 1²

- | | | |
|---|---|---|
| <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 checked="" 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 type="checkbox"/> Aquatic toxicity | <input type="checkbox"/> Unknown |
| <input checked="" type="checkbox"/> Endocrine | <input checked="" type="checkbox"/> Skin or eye | |

¹Pharos Project: Database that provides human and environmental health information of chemicals, materials, and building products. (<http://www.pharosproject.net>)

²GreenScreen (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

Composant	Rôle	Rapport massique	CAS ¹	GreenScreen® ²	Autre pointage applicable (pour plus de détails se référer à la HPD®)
Particles Wood	Main component	83.7% - 86.5%	9004-34-6	-	
UF Resin	Resin	7.6% - 7.9%	Undisclosed	LT-1	LT-UNK, BM-4, LT-P1
Water	Humidity	4.5% - 4.6%	7732-15-5	BM-4	
Urea	Scavenger	0.6%	57-13-6	LT-UNK	NoGS
Wax	Repellant	0.3%	64742-61-6	LT-1	
Ammonium Sulfate	Catalyst	0.1%	7783-20-2	LT-P1	
Melamine	Finishing	0.0% - 3.2%	Undisclosed	BM-1	LT-1, LT-P1. LT-UNK

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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TECHNICAL PERFORMANCES

PERFORMANCE TESTS

Non-exhaustive list. See particleboard product specifications sheet at www.uniboard.com for more information.

- Particleboard Standard ANSI A208.1-2016;
- Flame Spread Index: Class 3 or C ULC 723-10 (ASTM E84);
- Formaldehyde emissions test: Phase 2 of CARB ATCM 93120 and TSCA Title VI compliant.

WARRANTY

Lifetime warranty when Particleboards are used for the purpose for which they have been designed, that is to say for indoor use.

MANUFACTURER'S ENVIRONMENTAL MANAGEMENT PROGRAM

MANUFACTURER'S COMMITMENT

Respect for the environment underlines Uniboard®'s entire manufacturing process. Our environmental policy is based on the sustainable use of natural resources and was implemented with the health and well-being of our employees, customers and the community in mind.

Our environmental audit program helps us stay abreast of changing rules and regulations while identifying potential risks in our operations. Long before environmental concerns became mainstream, Uniboard was in the forefront by recycling post-industrial wood waste otherwise destined to be burnt or sent to land fill.

Today, we continue to ensure the proper use of wood fiber waste into value-added and environmental friendly products. Uniboard recuperates and reuses post-industrial and urban wood waste to reduce wood fiber consumption and land filling.



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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) Particleboard contributes to this credit due to the availability of a industry-wide (generic) EPD (type III) and is valued as 1/2 whole product out of the 20 needed for purposes of credit achievement calculation.	Contribute	ENVIRONMENTAL IMPACTS Industry-wide (generic) EPD, Type III The EPD excludes the laminated product.
			ATTRIBUTES Recycled Content pre-consumer (83.7% - 86.5%) and FSC®- Certified (100%) (When specified)
MR	Building Product Disclosure and Optimization – Sourcing or Raw Materials Option2: 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	INGREDIENTS AND EMISSIONS HPD® version 2.1.1 Health Product Declaration®
			ATTRIBUTES Recycled Content pre-consumer (83.7% - 86.5%) and FSC®- Certified (100%) (When specified)
MR	Building Product Disclosure and Optimization – Material Ingredients Option 1: Material ingredients reporting (1 point)	Contribute	INGREDIENTS AND EMISSIONS HPD® version 2.1.1 Health Product Declaration®
			ATTRIBUTES Recycled Content pre-consumer (83.7% - 86.5%) and FSC®- Certified (100%) (When specified)

INDOOR ENVIRONMENTAL QUALITY		PRODUCT CONTRIBUTIONS	
EQ	Low-Emitting Materials Option 1: Product category calculation (1-3 points)	Do not Contribute ¹	INGREDIENTS AND EMISSIONS ¹ CARB Phase 2 compliant but must be CARB NAF or ULEF compliant to contribute to credit requirements.
			ATTRIBUTES Recycled Content pre-consumer (83.7% - 86.5%) and FSC®- Certified (100%) (When specified)

LEED® v4 requirements for homes

Applies to single family homes, low-rise multi-family (one to three stories), or mid-rise multi-family (four to six stories); includes Homes and Multifamily Lowrise and Multifamily Midrise.

INDOOR ENVIRONMENTAL QUALITY		PRODUCT CONTRIBUTIONS	
MR Prereq 1	Certified Tropical Wood	Prerequisite	ATTRIBUTES Uniboard's product do not contain tropical species
			ATTRIBUTES Recycled Content pre-consumer (83.7% - 86.5%) and FSC®- Certified (100%) (When specified)
MR Credit 2	Environmentally Preferable Products Option 2: Environmentally Preferable Products ² At least 90% of all materials in each category must meet credit requirements. Particleboard contributes to 0.5 point for FSC® -Certified and to 0.5 point for Recycled Content.	Contribute ²	ATTRIBUTES Recycled Content pre-consumer (83.7% - 86.5%) and FSC®- Certified (100%) (When specified)
			INGREDIENTS AND EMISSIONS ³ CARB Phase 2 compliant but must be CARB NAF or ULEF compliant to contribute to credit requirements.

INDOOR ENVIRONMENTAL QUALITY		PRODUCT CONTRIBUTIONS	
EQ Credit 7	Low-Emitting Products At least 90% of all materials in each category must meet credit requirements.	Do not contribute ³	INGREDIENTS AND EMISSIONS ³ CARB Phase 2 compliant but must be CARB NAF or ULEF compliant to contribute to credit requirements.
			ATTRIBUTES Recycled Content pre-consumer (83.7% - 86.5%) and FSC®- Certified (100%) (When specified)

It is important to note that the points identified above are linked with each of the credits where the product contributes as part of a LEED® v4 certification process. The product itself is only one element among others to reach the target score.

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