

HPD UNIQUE IDENTIFIER: 31113

CLASSIFICATION: 06 42 00 Wood Paneling

PRODUCT DESCRIPTION: This HPD covers all available dimensions, thicknesses and laminate options for NU Green MR50® MDF by Uniboard®. NU Green MR50® medium density fiberboard (MDF) is a composite panel product composed primarily of cellulosic fibers and a bonding system cured under heat and pressure. No-Added Formaldehyde (NAF) panels.

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities Evaluation	<i>For all contents above the threshold, the manufacturer has:</i>
<input checked="" type="radio"/> Nested Materials Method	<input checked="" type="radio"/> 100 ppm	Completed in 5 of 5 Materials	Characterized <input checked="" type="radio"/> Yes <input type="radio"/> No
<input type="radio"/> Basic Method	<input type="radio"/> 1,000 ppm	Explanation(s) provided for Residuals/Impurities?	<i>Provided weight and role.</i>
Threshold Disclosed Per	<input type="radio"/> Per GHS SDS	<input checked="" type="radio"/> Yes <input type="radio"/> No	Screened <input checked="" type="radio"/> Yes <input type="radio"/> No
<input type="radio"/> Material	<input type="radio"/> Other		<i>Provided screening results using HPDC-approved methods.</i>
<input checked="" type="radio"/> Product			Identified <input type="radio"/> Yes <input checked="" type="radio"/> No
			<i>Provided name and CAS RN or other identifier.</i>

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

NESTED MATERIAL | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY

GREENSCREEN SCORE | HAZARD TYPE
WOOD [WOOD FIBER] WATER [WATER BM-4] DIISOCYANATE RESIN [POLYMERIC MDI (PMDI) LT-UNK | CAN | RES | EYE | SKI | MAM METHYLENE BISPHENYL DIISOCYANATE (PURE MDI) LT-UNK | CAN | RES | SKI | EYE | MAM DIPHENYLMETHANE DIISOCYANATE (MDI) - NON ISOMER SPECIFIC LT-UNK | SKI | EYE | CAN | MAM ISOCYANIC ACID, POLYMETHYLENEPOLYPHENYLENE ESTER, POLYMER WITH -HYDRO- -HYDROXYPOLY(OXY-1,2-ETHANEDIYL) LT-P1 | SKI | MAM 4,4'-MDI DIMER LT-UNK | SKI | EYE | MAM | CAN] MELAMINE-CELLULOSE [UNDISCLOSED NoGS UNDISCLOSED LT-UNK | UNDISCLOSED NoGS UNDISCLOSED LT-P1 | SKI UNDISCLOSED LT-UNK UNDISCLOSED LT-1 | CAN | END | MAM UNDISCLOSED BM-4 UNDISCLOSED LT-P1 | END | EYE | MAM UNDISCLOSED LT-1 | END | DEV | EYE | MAM | SKI UNDISCLOSED LT-UNK UNDISCLOSED BM-4] WAX [SLACK WAX (PETROLEUM) LT-1 | CAN | MUL | DEV]

Number of Greenscreen BM-4/BM3 contents ... 3
 Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... LT-1, LT-P1
 Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

Special Conditions applied: [BiologicalMaterial]

HPD prepared using a Nested Materials Inventory with a product threshold at 100 ppm. The content inventory includes ranges to encompass both NU Green MR50® MDF with and without melamine lamiate. NU Green MR50® MDF contain materials with Special Conditions (biological material and polymers) as per the HPDC. Reporting of Biological materials was done according to HPDC Guidelines. Guidelines for reporting polymers are still under development by HPDC and the manufacturers will update the HPD accordingly once these guidelines get published. Substances present in NU Green MR50® MDF, as well as known residuals and impurities, have been disclosed at 100 ppm. More details about how residuals and impurities were considered available in the appropriate sections.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE *See Section 3 for additional listings.*

VOC emissions: CDPH Standard Method V1.2 (Section 01350/CHPS) - Not applicable
 Sustainable forestry: FSC Certification - Chain of Custody (COC)
 Formaldehyde emissions: EPA TSCA Title VI (40 CFR 770), CAN/CSA-0160-16, ANSI A208.1 and CARB Composite Wood ATCM CA 93120 No-Added Formaldehyde (NAF)
 Multi-attribute: CPA 4-19 Eco-Certified Composite (ECC) - Value Added Certification

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Option 1.

Third Party Verified?

- Yes
- No

PREPARER: Vertima

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2023-01-24

PUBLISHED DATE: 2023-01-24

EXPIRY DATE: 2026-01-24

Section 2: Content in Descending Order of Quantity

This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold
- Nested Material Inventory method with individual Material-level thresholds

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.3, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-3-standard

WOOD %: 89.0000 - 91.5000

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Wood Dust, Fiber or Chips

RESIDUALS AND IMPURITIES NOTES: No residuals or impurities suspected to be present in wood fiber.

OTHER MATERIAL NOTES: Weight percentage may vary as this HPD covers multiple products, i.e. with or without laminate.

WOOD FIBER

ID: Biological Material

HAZARD DATA SOURCE: [HPDC Special Conditions Policy](#)

%: 100.0000 GreenScreen: Not Required RC: PreC NANO: No MATERIAL ROLE: Structure component

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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Hazard Screening is not applicable to this Special Condition

BIOLOGICAL MATERIALS CATEGORY: Tree-based materials

INGREDIENT DESCRIPTION: 9004-34-6

MATERIAL CONTENT NOTES: Pre-Consumer Recycled includes fiber, such as scrap, trimmings and cuttings, generated as a by-product from manufacturing and converting processes of primary wood products. Examples of this category include planer shavings, plytrim, sawdust, fines, chips and bagasse.

This disclosure does not provide information on allergens, hyper-accumulation of metals, production of any toxic substances during normal metabolic activities, pesticides, and other potential hazards or sources of hazards which may be found in certain biological materials.

WATER %: 4.7000 - 4.8000

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: No MATERIAL TYPE: Other: Natural resource

RESIDUALS AND IMPURITIES NOTES: No data collected regarding this material.

OTHER MATERIAL NOTES: Weight percentage may vary as this HPD covers multiple products, i.e. with or without laminate. Standard water is used (municipal).

WATER

ID: 7732-18-5

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:22**

%: **100.0000** GreenScreen: **BM-4** RC: **None** NANO: **No** SUBSTANCE ROLE: **Humectant**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
EXEMPT	European Union / European Commission (EU EC)	EU - REACH Exemptions Exempted from REACH Annex IV listing due to intrinsic safety

SUBSTANCE NOTES: See materials notes for details.

DIISOCYANATE RESIN

%: **3.1000 - 3.2000**

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Supplier A has reported impurities and they are listed in the material composition. Supplier B declared, backed by technical/scientific knowledge, that no residuals or impurities were present in their product.

OTHER MATERIAL NOTES: Weight percentage may vary as this HPD covers multiple products, i.e. with or without laminate, and this material comes from multiple suppliers.

POLYMERIC MDI (PMDI)

ID: 9016-87-9

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:23**

%: **30.0000 - 70.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Binder**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
EYE	GHS - New Zealand	Eye irritation category 2
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	GHS - Australia	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
MAM	GHS - New Zealand	Acute inhalation toxicity category 2
MAM	Québec CSST - WHMIS 1988	Class D1A - Very toxic material causing immediate and serious toxic effects
MAM	GHS - Australia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance

SUBSTANCE NOTES: Weight interval is used to cover recipe from multiple suppliers and keep exact recipe confidential.

METHYLENE BISPHENYL DIISOCYANATE (PURE MDI)

ID: 101-68-8

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:24**

%: **30.0000 - 45.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Monomer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]

CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
SKI	GHS - New Zealand	Skin irritation category 2
EYE	GHS - New Zealand	Eye irritation category 2
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	GHS - Australia	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
CAN	GHS - New Zealand	Carcinogenicity category 2
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
CAN	EU - Annex VI CMRs	Carcinogen Category 2 - Suspected human Carcinogen
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]
SKI	GHS - New Zealand	Skin sensitisation category 1
MAM	GHS - New Zealand	Acute inhalation toxicity category 2
EYE	GHS - Korea	H319 - Causes serious eye irritation [Serious eye damage/irritation - Category 2]
SKI	GHS - Korea	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
MAM	Québec CSST - WHMIS 1988	Class D1A - Very toxic material causing immediate and serious toxic effects
MAM	GHS - Japan	H330 - Fatal if inhaled [Acute toxicity (inhalation: gas) - Category 2]
MAM	GHS - Australia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
MAM	GHS - Japan	H330 - Fatal if inhaled [Acute toxicity (inhalation: dust, mist) - Category 2]
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	GHS - Korea	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products

RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
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SUBSTANCE NOTES: Weight interval is used to cover recipe from multiple suppliers and keep exact recipe confidential.

DIPHENYLMETHANE DIISOCYANATE (MDI) - NON ISOMER SPECIFIC

ID: 26447-40-5

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:24**

%: **0.0000 - 7.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Monomer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
SKI	GHS - New Zealand	Skin irritation category 2
EYE	GHS - New Zealand	Eye irritation category 2
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	GHS - Australia	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
CAN	GHS - New Zealand	Carcinogenicity category 2
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
CAN	EU - Annex VI CMRs	Carcinogen Category 2 - Suspected human Carcinogen
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]
SKI	GHS - New Zealand	Skin sensitisation category 1
MAM	GHS - New Zealand	Acute inhalation toxicity category 2
MAM	GHS - Australia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
MAM	GHS - Japan	H330 - Fatal if inhaled [Acute toxicity (inhalation: dust, mist) - Category 2]
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance

SUBSTANCE NOTES: Weight interval is used to cover recipe from multiple suppliers and keep exact recipe confidential.

ISOCYANIC ACID, POLYMETHYLENEPOLYPHENYLENE ESTER, POLYMER WITH -HYDRO- -HYDROXYPOLY(OXY-1,2-ETHANEDIYL)

ID: 57636-09-6

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:24**

%: **Impurity/Residual** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
MAM	GHS - Australia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: See material notes for details.

4,4'-MDI DIMER

ID: 17589-24-1

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:25**

%: **Impurity/Residual** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	GHS - Australia	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
MAM	GHS - Australia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance

SUBSTANCE NOTES: See material notes for details.

MELAMINE-CELLULOSE

%: 0.0000 - 2.8000

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities are below the reporting threshold.

OTHER MATERIAL NOTES: Weight percentage may vary as this HPD covers multiple products, i.e. with or without laminate, and this material comes from multiple suppliers. The composition of this material is confidential.

UNDISCLOSED

ID: Undisclosed

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:25**

%: **0.0000 - 65.0000** GreenScreen: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Polymer species**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2022 Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES: This substance is undisclosed as it is proprietary. Weight interval is used to account for the use of melamine cellulose from multiple suppliers and to keep exact product recipes confidential.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:24**

%: **0.0000 - 65.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Polymer species**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
	EC - CEPA DSL	Persistent
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2022 Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES: This substance is undisclosed as it is proprietary. Weight interval is used to account for the use of melamine cellulose from multiple suppliers and to keep exact product recipes confidential.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:25**

%: **21.0000 - 55.0000** GreenScreen: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Carrier**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
EXEMPT	European Union / European Commission (EU EC)	EU - REACH Exemptions Exempted from REACH Annex IV listing due to intrinsic safety

SUBSTANCE NOTES: This substance is undisclosed as it is proprietary. Weight interval is used to account for the use of melamine cellulose from multiple suppliers and to keep exact product recipes confidential.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:26**

%: **0.0000 - 35.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Polymer species**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	GHS - New Zealand	Skin sensitisation category 1
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2022 Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES: This substance is undisclosed as it is proprietary. Weight interval is used to account for the use of melamine cellulose from multiple suppliers and to keep exact product recipes confidential.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:26**

%: **0.0000 - 35.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Polymer species**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2022 Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES: This substance is undisclosed as it is proprietary. Weight interval is used to account for the use of melamine cellulose from multiple suppliers and to keep exact product recipes confidential.

UNDISCLOSED

ID: **Undisclosed**

%: **0.0000 - 25.0000**GreenScreen: **LT-1**RC: **None**NANO: **No**SUBSTANCE ROLE: **Opacifier**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
CAN	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
CAN	EU - Annex VI CMRs	Carcinogen Category 2 - Suspected human Carcinogen
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products
POSITIVE LIST	US Environmental Protection Agency (US EPA)	US EPA - DfE Safer Chemicals Ingredients list (SCIL) Colorants - Green Circle (Verified Low Concern)

SUBSTANCE NOTES: This substance is undisclosed as it is proprietary. Weight interval is used to account for the use of melamine cellulose from multiple suppliers and to keep exact product recipes confidential.

UNDISCLOSEDID: **Undisclosed**%: **0.0000 - 15.0000**GreenScreen: **BM-4**RC: **None**NANO: **No**SUBSTANCE ROLE: **Solvent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
EXEMPT	European Union / European Commission (EU EC)	EU - REACH Exemptions Exempted from REACH Annex IV listing due to intrinsic safety

SUBSTANCE NOTES: This substance is undisclosed as it is proprietary. Weight interval is used to account for the use of melamine cellulose from multiple suppliers and to keep exact product recipes confidential.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:27**

#: **0.0000 - 3.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Plasticizer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
EYE	GHS - New Zealand	Eye irritation category 2
MAM	GHS - New Zealand	Acute inhalation toxicity category 3
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes of Problematic Chemicals Bisphenols and Phthalates
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes of Problematic Chemicals Some Solvents
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2022 Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES: This substance is undisclosed as it is proprietary. Weight interval is used to account for the use of melamine cellulose from multiple suppliers and to keep exact product recipes confidential.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-01-24 9:04:28**

#: **0.0000 - 2.5000** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Plasticizer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
DEV	CA EPA - Prop 65	Developmental toxicity
DEV	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Developmental Toxicity
EYE	GHS - New Zealand	Eye irritation category 2
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes of Problematic Chemicals Some Solvents

SUBSTANCE NOTES: This substance is undisclosed as it is proprietary. Weight interval is used to account for the use of melamine cellulose from multiple suppliers and to keep exact product recipes confidential.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-01-24 9:04:26		
%: 0.0000 - 2.0000	GreenScreen: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Polymer species
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
None found		No listings found on Additional Hazard Lists		

SUBSTANCE NOTES: This material is a polymer in the product and is proprietary.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-01-24 9:04:27		
%: 0.0000 - 2.0000	GreenScreen: BM-4	RC: None	NANO: No	SUBSTANCE ROLE: Polymer species
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
EXEMPT	European Union / European Commission (EU EC)	EU - REACH Exemptions Exempted from REACH Annex IV listing due to intrinsic safety

SUBSTANCE NOTES: This material is part of the polymer and is proprietary.

WAX %: 0.5000

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Suppliers declared, backed by technical/scientific knowledge, that no residuals or impurities were present in their product; however, no such tests were performed on their product. According to Pharos, known or potential residuals for slack wax (64742-61-6) is paraffin (8002-74-2) and paraffin oil (8012-95-1).

OTHER MATERIAL NOTES: Slack wax is used as water repellent. Data Source for TSCA Definition 2018: A complex combination of hydrocarbons obtained from a petroleum fraction by solvent crystallization (solvent dewaxing) or as a distillation fraction from a very waxy crude. It consists predominantly of saturated straight and branched chain hydrocarbons having carbon numbers predominantly greater than C20.

SLACK WAX (PETROLEUM)

ID: 64742-61-6

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2023-01-24 9:04:28

%: 100.0000 GreenScreen: LT-1 RC: PreC NANO: No SUBSTANCE ROLE: Water resistance

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	EU - REACH Annex XVII CMRs	Carcinogen Category 2 - Substances which should be regarded as if they are Carcinogenic to man
CAN	EU - Annex VI CMRs	Carcinogen Category 1B - Presumed Carcinogen based on animal evidence
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CAN	GHS - Australia	H350 - May cause cancer [Carcinogenicity - Category 1A or 1B]
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H350 - May cause cancer [Carcinogenicity - Category 1A or 1B]
DEV	GHS - Australia	H361d - Suspected of damaging the unborn child [Reproductive toxicity - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: See materials notes for details.

Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

VOC EMISSIONS	CDPH Standard Method V1.2 (Section 01350/CHPS) - Not applicable	
CERTIFYING PARTY: Self-declared APPLICABLE FACILITIES: All facilities CERTIFICATE URL:	ISSUE DATE: 2022-09-27 EXPIRY DATE:	CERTIFIER OR LAB: n/a
CERTIFICATION AND COMPLIANCE NOTES: According to LEED v4, emissions and content requirements for Composite Wood are to follow the Composite Wood Evaluation which states: "Composite wood, as defined by the California Air Resources Board, Airborne Toxic Measure to Reduce Formaldehyde Emissions from Composite Wood Products Regulation, must be documented to have low formaldehyde emissions that meet the California Air Resources Board ATCM for formaldehyde requirements for ultra-low-emitting formaldehyde (ULEF) resins or no added formaldehyde resins. "		
SUSTAINABLE FORESTRY	FSC Certification - Chain of Custody (COC)	
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: Uniboard Canada Inc. - Multi-Site CERTIFICATE URL: https://info.fsc.org	ISSUE DATE: 2007-11-06 EXPIRY DATE: 2027-12-01	CERTIFIER OR LAB: Preferred by Nature
CERTIFICATION AND COMPLIANCE NOTES: Certificate registration code NC-COC-002726, NC-CE-002726		
FORMALDEHYDE EMISSIONS	EPA TSCA Title VI (40 CFR 770), CAN/CSA-0160-16, ANSI A208.1 and CARB Composite Wood ATCM CA 93120 No-Added Formaldehyde (NAF)	
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: Mont-Laurier, Quebec, Canada, J9L 3W3 CERTIFICATE URL: https://www.compositepanel.org/testing-certification/certification-programs/	ISSUE DATE: 2019-03-25 EXPIRY DATE:	CERTIFIER OR LAB: Composite Panel Association
CERTIFICATION AND COMPLIANCE NOTES: Fulfills The Requirements Of: EPA TSCA Title VI (40 CFR 770), CAN/CSA-0160- 16, ANSI A208.2 and California Air Resources Board (CARB) Airborne Toxic Control Measures (ATCM) 93120. State of California Air Resources Board Executive Order N-18-118 (https://www.arb.ca.gov/toxics/compwood/naf_ulef/listofnaf_ulef.htm).		
MULTI-ATTRIBUTE	CPA 4-19 Eco-Certified Composite (ECC) - Value Added Certification	
CERTIFYING PARTY: Second Party APPLICABLE FACILITIES: Mont-Laurier, Quebec, Canada, J9L 3W3 CERTIFICATE URL: https://www.compositepanel.org/testing-certification/certification-programs/	ISSUE DATE: 2019-01-22 EXPIRY DATE:	CERTIFIER OR LAB: Composite Panel Association
CERTIFICATION AND COMPLIANCE NOTES: Carbon Footprint; Locally Sourced Fiber; Recycled, Recovered or Post-Consumer Fiber Content; Sustainable Use of Wood Fiber; Responsible Wood Sourcing.		

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

No accessories are required for this product.

Section 5: General Notes

MANUFACTURER INFORMATION

MANUFACTURER: Uniboard Canada Inc.
ADDRESS: 5555, Ernest Cormier Street
 Laval Quebec H7C 2S9, Canada
WEBSITE: www.uniboard.com

CONTACT NAME: Pierre Martin
TITLE: Technology and Innovation Director
PHONE: 450.664.6000
EMAIL: pierre.martin@uniboard.com

The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.

KEY

Hazard Types

AQU Aquatic toxicity	LAN Land toxicity	PHY Physical hazard (flammable or reactive)
CAN Cancer	MAM Mammalian/systemic/organ toxicity	REP Reproductive
DEV Developmental toxicity	MUL Multiple	RES Respiratory sensitization
END Endocrine activity	NEU Neurotoxicity	SKI Skin sensitization/irritation/corrosivity
EYE Eye irritation/corrosivity	NF Not found on Priority Hazard Lists	UNK Unknown
GEN Gene mutation	OZO Ozone depletion	
GLO Global warming	PBT Persistent, bioaccumulative, and toxic	

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)	LT-P1 List Translator Possible 1 (Possible Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-2 Benchmark 2 (use but search for safer substitutes)	LT-UNK List Translator Benchmark Unknown
BM-1 Benchmark 1 (avoid - chemical of high concern)	NoGS No GreenScreen.
BM-U Benchmark Unspecified (due to insufficient data)	

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, www.greenscreenchemicals.org, and Best Practices for Hazard Screening on the HPDC website (hpd-collaborative.org).

Recycled Types

- PreC** Pre-consumer recycled content
- PostC** Post-consumer recycled content
- UNK** Inclusion of recycled content is unknown
- None** Does not include recycled content

Other Terms:

GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Inventory Methods:

- Nested Method / Material Threshold** Substances listed within each material per threshold indicated per material
- Nested Method / Product Threshold** Substances listed within each material per threshold indicated per product
- Basic Method / Product Threshold** Substances listed individually per threshold indicated per product

- Nano** Composed of nano scale particles or nanotechnology
- Third Party Verified** Verification by independent certifier approved by HPDC
- Preparer** Third party preparer, if not self-prepared by manufacturer
- Applicable facilities** Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- *a method for the assessment of exposure or risk associated with product handling or use,*
- *a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.*

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.