Nordic X-Lam by Nordic Structures

HPD UNIQUE IDENTIFIER: 26286
CLASSIFICATION: 06 17 19 Cross-Laminated Timber
PRODUCT DESCRIPTION: Nordic X-Lam cross-laminated timber (CLT) is composed of cross-wise Spruce-Pine-Fir (S-P-F) and/or Black Spruce species boards, forming a slab/panel product up to 15 inches thick, 9 feet wide, and 64 feet long. The result is a building material high in resistance and stiffness that can be used as shear walls, as exterior wall panels, and as interior partitions. Nordic X-Lam can also substitute concrete and steel decks slabs for structural floor and roof panels.

Section 1: Summary

CONTENT INVENTORY

Inventory Reporting Format
- Nested Materials Method
- Basic Method

Threshold Disclosed Per
- Material
- Product

Threshold Level
- 100 ppm
- 1,000 ppm
- Per GHS SDS
- Other

Residuals/Impurities
- Considered
- Partially Considered
- Not Considered

Explanation(s) provided for Residuals/Impurities?
- Yes
- No

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.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY | GREENSCREEN SCORE | HAZARD TYPE
-----------|--------------|----------------------|-------------------|-----------------
NORDIC X-LAM [ SC:BLACK SPRUCE | Not Screened]
POLYMETHYLENE POLYPHENYL ISOCYANATE LT-UNK | MUL | RES
CAN ISO CYANIC ACID, POLYMETHYLENEPOLYPHENYLENE ESTER, POLYMER WITH 2-METHYLOXIRANE AND OXIRANE NoGS 4,4'-DIPHENYLMETHANE DIISO CYANATE LT-UNK | MUL | RES | CAN | SKI | EYE ]

Number of Greenscreen BM-4/BM3 contents ... 0
Contents highest concern GreenScreen Benchmark or List translator Score ... LT-UNK
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:
Special conditions applied: BiologicalMaterial

[LEED v4] “Yes ex/SC” result is due only to materials and substances for which Special Conditions were applied. Thus “Yes ex/SC” does not disqualify the product for the LEED v4 Materials and Resources Disclosure and Optimization credit, Option 1.

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.2, and discloses hazards associated with all substances present at or above 1000 parts per million (ppm) in the finished product, along with the role and percent weight. Substances “Not Screened” are those with Special Conditions exceptions (Biological Materials).

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) - N/A
Formaldehyde emissions: APA Product Report PR-E740 Qualified Glulam and CLT Products with Low Formaldehyde Emissions Sustainable forestry: FSC Certification - Chain of Custody (COC)
LCA: Type III Environmental Product Declaration (EPD) by FPInnovations

CONSISTENCY WITH OTHER PROGRAMS
Pre-checked for LEED v4 Material Ingredients Option 1

PREPARER: Elixir Environmental
SCREENING DATE: 2021-10-20

Nordic X-Lam
hpdrepository.hpd-collaborative.org
<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

**VERIFIER:** Vertima  
**VERIFICATION #:** Ute-12680  
**PUBLISHED DATE:** 2021-10-20  
**EXPIRY DATE:** 2024-10-20
**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 2.2, available on the HPDC website at: [www.hpd-collaborative.org/hpd-2-2-standard](http://www.hpd-collaborative.org/hpd-2-2-standard)

### NORDIC X-LAM

**PRODUCT THRESHOLD:** 1000 ppm  
**RESIDUALS AND IMPURITIES CONSIDERED:** Yes

**RESIDUALS AND IMPURITIES NOTES:** Residuals and Impurities were “Considered”, as outlined in Emerging Best Practices. No residuals or impurities are known or expected to be present at or above the Content Inventory Threshold indicated that have a GS score of BM-1, LT-1, LT-P1 or NoGS for wood or adhesives (post-manufacture state) based on information provided in supplier disclosures and as predicted by process chemistry (Pharos CML).

**OTHER PRODUCT NOTES:**

**SC:BLACK SPRUCE**

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD</th>
<th>Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE</th>
<th>Not Screened</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 99.1000 - 99.2000</td>
<td>GS: Not Screened</td>
<td>RC: None</td>
<td>NANO: No</td>
</tr>
<tr>
<td>SUBSTANCE ROLE: Structure component</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**SUBSTANCE NOTES:**

- Version: SCBioMats/2018-02-23
- Category: Tree-based materials
- Identifier: Picea mariana

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. FSC Certified. Species: Spruce-Pine-Fir; contains 90% Black Spruce.

### POLY METHYLENE POLYPHENYL ISOCYANATE

**ID:** 9016-87-9

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD</th>
<th>Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE</th>
<th>2021-10-20 17:50:19</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.1000 - 0.3000</td>
<td>GS: LT-UNK</td>
<td>RC: None</td>
<td>NANO: No</td>
</tr>
<tr>
<td>SUBSTANCE ROLE: Adhesive</td>
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</table>

**HAZARD TYPE**

<table>
<thead>
<tr>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RES</td>
<td>AOEC - Asthmagens</td>
</tr>
<tr>
<td>CAN</td>
<td>MAK</td>
</tr>
<tr>
<td>RES</td>
<td>MAK</td>
</tr>
<tr>
<td>RES</td>
<td>US EPA - PPT Chemical Action Plans</td>
</tr>
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</table>

**SUBSTANCE NOTES:** Adhesive component.
### ISOCYANIC ACID, POLYMETHYLENEPOLYPHENYLENE ESTER, POLYMER WITH 2-METHYLOXIRANE AND OXIRANE

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2021-10-20 17:50:19

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<thead>
<tr>
<th>%:</th>
<th>0.1000 - 0.3000</th>
<th>GS: NoGS</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>SUBSTANCE ROLE: Adhesive</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  
None found

**AGENCY AND LIST TITLES**  
No warnings found on HPD Priority Hazard Lists

**WARNINGs**

**SUBSTANCE NOTES:** Adhesive component.

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### 4,4'-DIPHENYLMETHANE DIISOCYANATE

**ID:** 101-68-8

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2021-10-20 17:50:20

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<thead>
<tr>
<th>%:</th>
<th>0.0700 - 0.1300</th>
<th>GS: LT-UNK</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>SUBSTANCE ROLE: Adhesive</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  
MUL  
RES  
CAN  
RES  
RES  
SK1  
SK1  
CAN  
EYE  
RES

**AGENCY AND LIST TITLES**

- US EPA - PPT Chemical Action Plans  
- AOEC - Asthmagens  
- MAK  
- MAK  
- MAK  
- US EPA - PPT Chemical Action Plans  
- EU - GHS (H-Statements)  
- EU - GHS (H-Statements)  
- EU - GHS (H-Statements)  
- EU - GHS (H-Statements)  
- EU - GHS (H-Statements)

**WARNINGs**

- EPA Chemical of Concern - Action Plan published  
- Asthmagen (G) - generally accepted  
- Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels  
- Sensitizing Substance Sah - Danger of airway & skin sensitization  
- Inhalation sensitizer causing asthma and lung damage  
- H317 - May cause an allergic skin reaction [Skin sensitization - Category 1]  
- H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]  
- H351 - Suspected of causing cancer [Carcinogenicity - Category 2]  
- H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]  
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled [Respiratory sensitization - Category 1]

**SUBSTANCE NOTES**

Adhesive component.
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.

<table>
<thead>
<tr>
<th>VOC EMISSIONS</th>
<th>CDPH Standard Method V1.2 (Section 01350/CHPS) - N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERTIFYING PARTY:</td>
<td>Self-declared</td>
</tr>
<tr>
<td>APPLICABLE FACILITIES:</td>
<td>Nordic Structures located in Chibougamau, Quebec, Canada</td>
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<tr>
<td>CERTIFICATE URL:</td>
<td></td>
</tr>
<tr>
<td>CERTIFICATION AND COMPLIANCE NOTES:</td>
<td>LEED v4 Low Emitting Materials requirements, including CDPH testing, does not apply to overhead structural elements (exposed, finished, and unfinished ceilings) vertical structural elements (wall panels), structural composite wood included in the flooring, ceiling, wall panels categories.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FORMALDEHYDE EMISSIONS</th>
<th>APA Product Report PR-E740 Qualified Glulam and CLT Products with Low Formaldehyde Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERTIFYING PARTY:</td>
<td>Second Party</td>
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<tr>
<td>APPLICABLE FACILITIES:</td>
<td>Nordic Structures located in Chibougamau, Quebec, Canada</td>
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<tr>
<td>ISSUE DATE:</td>
<td>2021-09-29</td>
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<tr>
<td>EXPIRY DATE:</td>
<td>2021-09-29</td>
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<tr>
<td>CERTIFIER OR LAB:</td>
<td>APA - The Engineered Wood Association</td>
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<tr>
<td>CERTIFICATION AND COMPLIANCE NOTES:</td>
<td>Certificate for low formaldehyde emission level disclosure.</td>
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</table>

<table>
<thead>
<tr>
<th>SUSTAINABLE FORESTRY</th>
<th>FSC Certification - Chain of Custody (COC)</th>
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<tbody>
<tr>
<td>CERTIFYING PARTY:</td>
<td>Third Party</td>
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<tr>
<td>APPLICABLE FACILITIES:</td>
<td>Nordic Structures located in Chibougamau, Quebec, Canada</td>
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<tr>
<td>ISSUE DATE:</td>
<td>2019-03-09</td>
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<tr>
<td>EXPIRY DATE:</td>
<td>2024-03-08</td>
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<tr>
<td>CERTIFIER OR LAB:</td>
<td>NEPCon</td>
</tr>
<tr>
<td>CERTIFICATION AND COMPLIANCE NOTES:</td>
<td>FSC License Code: FSC-C002803. Certificate registration code: NC-COC-003885 NC-CW-003885; RA-COC-003885 RA-CW-003885. Chantiers Chibougamau Ltée and Nordic Structures are certified for the Single Chain of Custody and Controlled Wood for sustainable forestry practices. Products included in certificate scope are: Planks; Woodchips and sawdust; Footing, Glued-laminated, Isolated stud, Cross-laminated timber, Joist; Oriented Strand Board (OSB); Softwood lumber.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCA</th>
<th>Type III Environmental Product Declaration (EPD) by FPInnovations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERTIFYING PARTY:</td>
<td>Third Party</td>
</tr>
<tr>
<td>APPLICABLE FACILITIES:</td>
<td>Nordic Structures located in Chibougamau, Quebec, Canada</td>
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<tr>
<td>CERTIFICATE URL:</td>
<td><a href="https://library.fpinnovations.ca/en/permalink/fpipub7910">https://library.fpinnovations.ca/en/permalink/fpipub7910</a></td>
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<td>ISSUE DATE:</td>
<td>2018-08-01</td>
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<td>EXPIRY DATE:</td>
<td>2023-08-31</td>
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<tr>
<td>CERTIFIER OR LAB:</td>
<td>FPInnovations</td>
</tr>
<tr>
<td>CERTIFICATION AND COMPLIANCE NOTES:</td>
<td>EPD is based on a life cycle assessment study compiled in 2018 with input and environmental output data gathered for the 2017 calendar year. Scope: Cradle-to-gate. Declared unit: 1m3 of CLT at mill gate. System boundary: Life cycle activities from resource extraction through product (CLT) manufacture. Geographic coverage: North America.</td>
</tr>
</tbody>
</table>

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:** Nordic Structures  
**ADDRESS:** 100-1100, Avenue des Canadiens-de-Montréal  
Montréal Québec H3B 2S2, Canada  
**WEBSITE:** www.nordic.ca

**CONTACT NAME:** Julie Frappier  
**TITLE:** Director, Technical Services  
**PHONE:** 514.871.8526  
**EMAIL:** info@nordic.ca

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

**GreenScreen (GS)**
- BM-4 Benchmark 4 (prefer-safer chemical)
- BM-3 Benchmark 3 (use but still opportunity for improvement)
- BM-2 Benchmark 2 (use but search for safer substitutes)
- BM-1 Benchmark 1 (avoid - chemical of high concern)
- BM-U Benchmark Unspecified (due to insufficient data)
- LT-P1 List Translator Possible 1 (Possible Benchmark-1)
- LT-1 List Translator 1 (Likely Benchmark-1)
- LT-UNK List Translator Benchmark Unknown (the chemical is present on at least one GreenScreen Specified List, but the information contained within the list did not result in a clear mapping to a LT-1 or LTP1 score.)
- NoGS No GreenScreen.

**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

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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.