

HPD UNIQUE IDENTIFIER: 785554839552
CLASSIFICATION: 07 22 16 Roof Board Insulation
PRODUCT DESCRIPTION: HIGH DENSITY Fiberboard Roof Insulation Cover Board

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Table with 4 columns: Inventory Reporting Format, Threshold Level, Residuals/Impurities Evaluation, and For all contents above the threshold, the manufacturer has: (Characterized, Screened, Identified). Includes radio button options for 'Yes' and '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.

PRODUCT | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE

STRUCTODEK [PULP, CELLULOSE NoGS CORN STARCH NoGS
WATER BM-4 BENTONITE LT-UNK HAEMATITE LT-UNK ALKENES,
C24-54-BRANCHED AND LINEAR .ALPHA.- NoGS SLACK WAX
(PETROLEUM) LT-1 | CAN | MUL | DEV SULFURIC ACID, ALUMINUM
SALT (3:2) LT-P1 | SKI | EYE | AQU ALUMINATE (ALO21#-), SODIUM
LT-P1 | SKI | EYE QUARTZ BM-1 | CAN | MAM | GEN OCTADECANOIC
ACID, COMPD. WITH 2,2',2''-NITRILOTRIS[ETHANOL] (1:1) NoGS
SODIUM HYDROXIDE LT-P1 | SKI | MAM | EYE]

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

INVENTORY AND SCREENING NOTES:

STRUCTODEK ingredients have been screened against chemicals listed in Living Building Challenge Red List 4.0 and does not contain the listed chemicals to 100ppm. Exact percentages are not disclosed to protect proprietary information. This product is not wet applied therefore VOC content data is not applicable.

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: N/A

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Summary table with 3 columns: Third Party Verified? (Yes/No), PREPARER: Self-Prepared, VERIFIER: VERIFICATION #:, SCREENING DATE: 2023-10-06, PUBLISHED DATE: 2023-10-06, EXPIRY DATE: 2026-10-06.

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

STRUCTODEK

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Partially

RESIDUALS AND IMPURITIES NOTES: Residuals and Impurities were considered based on supplier SDS. SDS may not identify all Residuals or Impurities present that would require reporting on the HPD.

OTHER PRODUCT NOTES: Composition ranges are provided to protect proprietary information.

PULP, CELLULOSE

ID: 65996-61-4

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-10-06 6:29:35

%: 79.5000 - 98.6000

GreenScreen: NoGS

RC: PreC

NANO: Unknown

SUBSTANCE ROLE: Structure component

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: The overall product pre-consumer recycled content for STRUCTODEK is 75%.

The pre-consumer recycled content for the sourced wood is from sawmill waste including, but not limited to, sawdust, bark, chips, slabs, and cuttings from lumber or timber.

CORN STARCH

ID: 9005-25-8

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-10-06 6:29:36

%: 0.5000 - 9.0000

GreenScreen: NoGS

RC: None

NANO: Unknown

SUBSTANCE ROLE: Binder

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:

WATER

ID: 7732-18-5

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-10-06 6:29:36**

%: **0.0000 - 4.3000** GreenScreen: **BM-4** RC: **None** NANO: **Unknown** 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:

BENTONITE

ID: 1302-78-9

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-10-06 6:29:36**

%: **0.2000 - 1.9980** GreenScreen: **LT-UNK** RC: **None** NANO: **Unknown** SUBSTANCE ROLE: **Viscosity modifier**

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:

HAEMATITE

ID: 1317-60-8

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-10-06 6:29:36**

%: **0.1580 - 1.6800** GreenScreen: **LT-UNK** RC: **None** NANO: **Unknown** SUBSTANCE ROLE: **Pigment**

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:

ALKENES, C24-54-BRANCHED AND LINEAR .ALPHA.-

ID: 131459-42-2

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: 2023-10-06 6:29:36

%: **0.0000 - 1.3750** GreenScreen: **NoGS** RC: **None** NANO: **Unknown** SUBSTANCE ROLE: **Water resistance**

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:

SLACK WAX (PETROLEUM)

ID: 64742-61-6

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: 2023-10-06 6:29:36

%: **0.0000 - 1.3000** GreenScreen: **LT-1** RC: **None** NANO: **Unknown** SUBSTANCE ROLE: **Water resistance**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
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]

CAN EU - REACH Annex XVII CMRs Carcinogens: Category 1B

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 Children's Products
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

SUBSTANCE NOTES:

SULFURIC ACID, ALUMINUM SALT (3:2)

ID: 10043-01-3

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: 2023-10-06 6:29:37

%: **0.0000 - 0.7500** GreenScreen: **LT-P1** RC: **None** NANO: **Unknown** SUBSTANCE ROLE: **Sizing agent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	GHS - New Zealand	Skin irritation category 2
EYE	GHS - New Zealand	Eye irritation category 2
EYE	GHS - Australia	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 2
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 Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products

SUBSTANCE NOTES:

ALUMINATE (ALO21#-), SODIUM

ID: 1302-42-7

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: 2023-10-06 6:29:37

%: **0.0000 - 0.4200** GreenScreen: **LT-P1** RC: **None** NANO: **Unknown** SUBSTANCE ROLE: **Buffer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	GHS - New Zealand	Skin irritation category 2
EYE	GHS - New Zealand	Eye irritation category 2
EYE	GHS - Japan	H318 - Causes serious eye damage [Serious eye damage / eye irritation - Category 1]
SKI	GHS - Japan	H314 - Causes severe skin burns and eye damage [Skin corrosion / irritation - Category 1]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES:

QUARTZ

ID: 14808-60-7

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: 2023-10-06 6:29:37

%: 0.0180 - 0.4000

GreenScreen: **BM-1**

RC: **None**

NANO: **Unknown**

SUBSTANCE ROLE: **Impurity**

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	US NIH - Report on Carcinogens	Known to be Human Carcinogen (respirable size - occupational setting)
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	IARC	Group 1 - Agent is carcinogenic to humans - inhaled from occupational sources
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]
CAN	GHS - New Zealand	Carcinogenicity category 1
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
GEN	GHS - Japan	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - 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

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

SUBSTANCE NOTES:

OCTADECANOIC ACID, COMPD. WITH 2,2',2''-NITRILOTRIS[ETHANOL] (1:1)

ID: **4568-28-9**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-10-06 6:29:37**

%: 0.0000 - 0.1750

GreenScreen: **NoGS**

RC: **None**

NANO: **Unknown**

SUBSTANCE ROLE: **Surfactant**

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:

SODIUM HYDROXIDE

ID: 1310-73-2

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2023-10-06 6:29:37**

%: **0.0000 - 0.1000** GreenScreen: **LT-P1** RC: **None** NANO: **Unknown** SUBSTANCE ROLE: **Buffer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1A or 1B or 1C]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
EYE	GHS - New Zealand	Serious eye damage category 1
EYE	GHS - Japan	H318 - Causes serious eye damage [Serious eye damage / eye irritation - Category 1]
SKI	GHS - Japan	H314 - Causes severe skin burns and eye damage [Skin corrosion / irritation - Category 1]
SKI	GHS - Australia	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1A or 1B or 1C]
SKI	GHS - Korea	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1]
SKI	GHS - New Zealand	Skin corrosion category 1B
SKI	GHS - Malaysia	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1A or 1B or 1C]
EYE	GHS - Malaysia	H318 - Causes serious eye damage [Serious eye damage/eye irritation - Category 1]
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

SUBSTANCE NOTES:

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

N/A

CERTIFYING PARTY: Self-declared

ISSUE DATE: 2023-09-07

CERTIFIER OR LAB: None

APPLICABLE FACILITIES: All.

EXPIRY DATE:

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES:

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.

LAMINATED FIBERBOARD TAPERED EDGE/CANT STRIP PROVIDED BY BRF AND OTHERS

MANUFACTURER (OR GENERIC): **Generic**

HPD URL: no HPD available

ACCESSORY TYPE: **Other**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: TAPERED EDGE where applicable for proper roof drainage and slope to prevent water standing on the roof. CANT STRIP where applicable for 90 degree angle where roof will meet the parapet wall.

ADHESIVE SUPPLIED BY OTHERS

MANUFACTURER (OR GENERIC): **Generic**

HPD URL: no HPD available

ACCESSORY TYPE: **Adhesive**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: No Conditions Provided

MECHANICAL FASTENERS SUPPLIED BY OTHERS

MANUFACTURER (OR GENERIC): **Generic**

HPD URL: no HPD available

ACCESSORY TYPE: **Fastner**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Fastening Patterns: Fastening patterns will vary based upon specific membrane manufacturers' assemblies. Please refer to membrane manufacturer fastening requirements.

Section 5: General Notes

STRUCTODEK ingredients have been screened against chemicals listed in Living Building Challenge Red List 4.0 and does not contain the listed chemicals to 100ppm.

Exact percentages are not disclosed to protect proprietary information.

Residuals and Impurities were considered based on supplier SDS. SDS may not identify all Residuals or Impurities present that would require reporting on the HPD.

The overall product pre-consumer recycled content is 75%.

The pre-consumer recycled content for the sourced wood is from sawmill waste including, but not limited to, sawdust, bark, chips, slabs, and cuttings from lumber or timber.

This product is a USDA Certified Biobased Product with 100% Bio-based content material as tested by ASTM 6866-22 Method B (Accelerator Mass Spectrometry) Total Organic Carbon.

MANUFACTURER INFORMATION

MANUFACTURER: Blue Ridge Fiberboard
ADDRESS: 250 Celotex Drive
 Danville, Virginia 24541
COUNTRY: United States of America

WEBSITE: www.wrmeadows.com
CONTACT NAME: Kimberly Ann Lombardozzi
TITLE: Sustainability Manager
PHONE: 847-214-2100
EMAIL: klombardozzi@wrmeadows.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

