HPD UNIQUE IDENTIFIER: 2535600256000
CLASSIFICATION: 07 22 16 Roof Board Insulation
PRODUCT TYPE: Polyisocyanurate Foam-Plastic Board (Insulation)
PRODUCT DESCRIPTION: SOPRA-ISO is a polyisocyanurate thermal insulation board used in roofing assemblies, composed of a closed-cell, rigid foam core faced on both surfaces with a glass fiber reinforced cellulosic facer.

Section 1: Summary

Nested Method / Material Threshold

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 Evaluation
Completed in 2 of 2 Materials

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

For all contents above the threshold, the manufacturer has:

Characterized (•) Yes ( ) No
Provided weight and role.

Screened (•) Yes ( ) No
Provided screening results using HPDC-approved methods.

Identified (•) Yes ( ) No
Provided name and CAS RN or other identifier.

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

POLYISOCYANURATE FOAM [POLYMERIC MDI (PMDI) LT-UNK | CAN | RES | EYE | SKI | MAM **POLYETHER POLYOL** LT-UNK **PENTANE** LT-P1 | MUL | PHY | AQU | MAM | EYE *DIETHYLENE GLYCOL (DIETHYLENE GLYCOL)* LT-P1 | END | MAM | REP **TRIS(1-CHLORO-2-PROPYL)PHOSPHATE (TCPP, TMCP)** BM-U | END | MUL | AQU | MAM | REP **2-ETHYLHEXANOIC ACID, POTASSIUM SALT** LT-1 | REP | DEV | SKI | EYE **POTASSIUM ACETATE** LT-UNK **BIS(2-DIMETHYLAMINOETHYL) (METHYL)AMINE** LT-P1 | MUL | SKI | MAM | EYE **POLYSILOXANE** NoGS **WATER** BM-4 *METHYLENE BISPHENYL DIISOCYANATE (PURE MDI) (METHYLENE BISPHENYL DIISOCYANATE (PURE MDI))* LT-UNK | CAN | RES | SKI | EYE | MAM *DIPHENYLMETHANE-2,4'- DIISOCYANATE (2,4'-MDI) (DIPHENYLMETHANE-2,4'-DIISOCYANATE (2,4'-MDI))* LT-UNK | SKI | EYE | CAN | MAM *DIPHENYLMETHANE-2,2'-DIISOCYANATE (2,2'-MDI) (DIPHENYLMETHANE-2,2'-DIISOCYANATE (2,2'-MDI))* LT-UNK | SKI | EYE | CAN | MAM **] GLASS FIBER REINFORCED CELLULOSIC FACER [CELLULOSE, MICROCRYSTALLINE (KRAFT PAPER (CELLULOSE, MICROCRYSTALLINE))** LT-UNK **SOLID GLASS AND GLASS / MINERAL FIBER (SEE VARIANTS)** LT-UNK **]**

Number of Greenscreen BM-4/BM3 contents ... 1

Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... LT-P1, LT-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

SOPRA-ISO is available in various thicknesses, up to 6 inches. The percentage of foam and facer will vary with thickness, which explains why ranges were given. The exact composition of the polyisocyanurate foam was not disclosed to protect proprietary information; ranges were also given. No substance other than those listed in this HPD have been added to the finished product during its manufacturing. Residuals could not be considered for all materials because information was not provided by all raw materials vendors.

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) - Classroom & Office scenario
VOC emissions: UL/GreenGuard Gold Certified
Fire resistance of roof assembly: CAN/ULC-S107 (Drummondville)
Resistance to dynamic wind ulpift: CSA A123.21 (Drummondville)

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Option 1.
Pre-checked for LEED v4.1 Option 1.

Third Party Verified?
- ( ) Yes
- (•) No

PREPARER: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2025-06-26
PUBLISHED DATE: 2025-06-26
EXPIRY DATE: 2028-06-26

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

POLYISOCYANURATE FOAM **%: 66.3000 - 92.4000**

MATERIAL THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Residuals were considered through information disclosed to the manufacturer by the materials suppliers.

OTHER MATERIAL NOTES: Percentage of foam in SOPRA-ISO varies with thickness of the product as follows:
1-inch SOPRA-ISO: 66.3% foam;
2-inch SOPRA-ISO: 79.0% foam;
4-inch SOPRA-ISO: 88.3% foam;
5-inch SOPRA-ISO: 92.4% foam.
The exact percentage of substances in foam were not disclosed to protect proprietary information. Ranges were given.

POLYMERIC MDI (PMDI) ID: **9016-87-9**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:25**

%: **55.0000 - 65.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Intermediate**

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]
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]
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]
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]
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
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 All Products

SUBSTANCE NOTES: Polymeric MDI reacts completely during production of the foam.

POLYETHER POLYOL

ID: **9082-00-2**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:26**

%: **25.0000 - 30.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Intermediate**

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: Polyester polyol reacts completely during foam production.

PENTANE

ID: **109-66-0**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:26**

%: **3.0000 - 10.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Blowing agent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
EYE	GHS - New Zealand	Eye irritation category 2
AQU	GHS - Australia	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
AQU	GHS - Japan	H401 - Toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 2]
PHY	GHS - New Zealand	Flammable liquids category 2
PHY	GHS - Japan	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
PHY	GHS - Malaysia	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
PHY	GHS - Australia	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
AQU	GHS - Malaysia	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]
MAM	GHS - Malaysia	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]
MAM	GHS - Australia	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents

SUBSTANCE NOTES: Pentane isomer(s) used as blowing agent. Exact nature and percentages of isomers are not disclosed to protect proprietary information.

DIETHYLENE GLYCOL (DIETHYLENE GLYCOL) ID: **111-46-6**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:27**

%: **3.0000 - 7.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
REP	GHS - Japan	H361 - Suspected of damaging fertility or the unborn child [Toxic to reproduction - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 Cosmetics and Personal Care Products

SUBSTANCE NOTES: This substance is an impurity found in polyether polyol and potassium-based catalyst.

TRIS(1-CHLORO-2-PROPYL)PHOSPHATE (TCPP, TMCP) ID: **13674-84-5**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:27**

%: **0.1000 - 5.0000** GreenScreen: **BM-U** RC: **None** NANO: **No** SUBSTANCE ROLE: **Flame retardant**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 3
MAM	GHS - Japan	H371 - May cause damage to organs [Specific target organs/systemic toxicity following single exposure - Category 2]
REP	GHS - Japan	H361 - Suspected of damaging fertility or the unborn child [Toxic to reproduction - Category 2]
REP	GHS - Australia	H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child [Reproductive toxicity - 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
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Core Restrictions
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective February 1, 2025 Red List substances to avoid in Living Building Challenge V4.0 projects
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 Avoidance of Organohalogens and Functionally Related Chemical Classes of Concern

SUBSTANCE NOTES: TCPP is used as flame retardant.

2-ETHYLHEXANOIC ACID, POTASSIUM SALT

ID: **3164-85-0**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:25**

%: **0.1000 - 2.0000** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Catalyst**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
REP	EU - Annex VI CMRs	Reproductive Toxicity - Category 1B
DEV	EU - GHS (H-Statements) Annex 6 Table 3-1	H360D - May damage the unborn child [Reproductive toxicity - Category 1A or 1B]
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	GHS - Australia	H318 - Causes serious eye damage [Serious eye damage/eye irritation - Category 1]
DEV	GHS - Australia	H361 - Suspected of damaging fertility or the unborn child [Reproductive toxicity - Category 2]
REP	EU - REACH Annex XVII CMRs	Reproductive toxicants: Category 1B

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products

SUBSTANCE NOTES: Catalyst for polymerization.

POTASSIUM ACETATE

ID: **127-08-2**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:26**

%: **0.1000 - 1.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Catalyst**

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: Catalyst for polymerization.

BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE

ID: **3030-47-5**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:26**

%: **0.1000 - 1.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Catalyst**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
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	EU - GHS (H-Statements) Annex 6 Table 3-1	H311 - Toxic in contact with skin [Acute toxicity (dermal) - Category 3]
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
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 - Australia	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1A or 1B or 1C]
SKI	GHS - New Zealand	Skin corrosion category 1B
MAM	GHS - Japan	H311 - Toxic in contact with skin [Acute Toxicity (dermal) - Category 3]
MAM	GHS - Australia	H311 - Toxic in contact with skin [Acute toxicity (dermal) - Category 3]
MAM	GHS - New Zealand	Acute dermal toxicity category 3
MAM	GHS - New Zealand	Acute oral toxicity category 3
SKI	GHS - Japan	H314 - Causes severe skin burns and eye damage [Skin corrosion / irritation - Category 1B]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents

SUBSTANCE NOTES: Catalyst for polymerization.

POLYSILOXANE

ID: **9011-19-2**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:27**

%: **0.1000 - 1.0000** GreenScreen: **NoGS** RC: **None** NANO: **No** 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: Foam control agent.

WATER

ID: **7732-18-5**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:27**

%: **0.1000 - 1.0000** GreenScreen: **BM-4** RC: **None** NANO: **No** SUBSTANCE ROLE: **Blowing agent**

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: Plain water

METHYLENE BISPHENYL DIISOCYANATE (PURE MDI)
(METHYLENE BISPHENYL DIISOCYANATE (PURE MDI))

ID: **101-68-8**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:28**

%: **0.0000 - 0.1000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

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 - 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	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 All Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 Cosmetics and Personal Care Products

SUBSTANCE NOTES: This substance is an impurity in polymeric MDI.

DIPHENYLMETHANE-2,4'- DIISOCYANATE (2,4'-MDI)
(DIPHENYLMETHANE-2,4'- DIISOCYANATE (2,4'-MDI))

ID: **5873-54-1**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:29**

%: **0.0000 - 0.1000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

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 - 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]
CAN	EU - Annex VI CMRs	Carcinogen Category 2 - Suspected human Carcinogen
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
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 All Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 Cosmetics and Personal Care Products

SUBSTANCE NOTES: This substance is an impurity in polymeric MDI.

DIPHENYLMETHANE-2,2'-DIISOCYANATE (2,2'-MDI)
(DIPHENYLMETHANE-2,2'-DIISOCYANATE (2,2'-MDI))

ID: **2536-05-2**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:29**

%: **0.0000 - 0.1000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

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 - 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]
CAN	EU - Annex VI CMRs	Carcinogen Category 2 - Suspected human Carcinogen
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
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 All Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 Cosmetics and Personal Care Products

SUBSTANCE NOTES: This substance is an impurity in polymeric MDI.

GLASS FIBER REINFORCED CELLULOSIC FACER **%: 7.6000 - 33.7000**

MATERIAL THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: No MATERIAL TYPE: Paper or Cardboard

RESIDUALS AND IMPURITIES NOTES: Residuals were not considered because this information was not disclosed to the manufacturer by the materials suppliers.

OTHER MATERIAL NOTES: Percentage of cellulosic facer in SOPRA-ISO varies with thickness of the product as follows:
1-inch SOPRA-ISO: 33.7% facer;
2-inch SOPRA-ISO: 21.0% facer;
4-inch SOPRA-ISO: 11.7% facer;
5-inch SOPRA-ISO: 7.6% facer.

CELLULOSE, MICROCRYSTALLINE (KRAFT PAPER (CELLULOSE, MICROCRYSTALLINE)) ID: **9004-34-6**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:30**

%: **90.0000 - 90.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** 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
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Main base for cellulosic facer material on the SOPRA-ISO boards.

SOLID GLASS AND GLASS / MINERAL FIBER (SEE VARIANTS) ID: **65997-17-3**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 5:39:30**

%: **10.0000 - 10.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** 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 V listing due to intrinsic safety

SUBSTANCE NOTES: Continuous filament glass fiber.

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) - Classroom & Office scenario**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Drummondville, QC, Canada.
CERTIFICATE URL: https://spot.ul.com/

ISSUE DATE: 2019-03-29 00:00:00
EXPIRY DATE:

CERTIFIER OR LAB: UL Environment

CERTIFICATION AND COMPLIANCE NOTES: UL Environment Report # 1000577602-1947844.

VOC EMISSIONS — **UL/GreenGuard Gold Certified**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Drummondville, QC, Canada.
CERTIFICATE URL: https://spot.ul.com/main-app/products/detail/606375416f2e19d43629cee3

ISSUE DATE: 2021-03-29 00:00:00
EXPIRY DATE: 2026-03-29 00:00:00

CERTIFIER OR LAB: UL Environment

CERTIFICATION AND COMPLIANCE NOTES: Certificate Number 228127-420.

FIRE RESISTANCE OF ROOF ASSEMBLY — **CAN/ULC-S107 (Drummondville)**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Drummondville, Québec, Canada
CERTIFICATE URL: http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=TGFU.R19921&ccnshorttitle=Roofing+Systems&objid=1083620758&cfgid=1073741824&version=versionless&parent_id=1073993597&sequence=1

ISSUE DATE: 2012-01-01 00:00:00
EXPIRY DATE:

CERTIFIER OR LAB: Underwriters Laboratories of Canada

CERTIFICATION AND COMPLIANCE NOTES: This product is listed in a large number of fire-rated roofing assemblies. These listings are maintained through periodic audits from ULC in the SOPREMA plants.

RESISTANCE TO DYNAMIC WIND ULPIFT — **CSA A123.21 (Drummondville)**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Drummondville, Québec, Canada
CERTIFICATE URL:

ISSUE DATE: 2020-03-19 00:00:00
EXPIRY DATE: 2025-03-19 00:00:00

CERTIFIER OR LAB: Exp

CERTIFICATION AND COMPLIANCE NOTES: This product has been tested in a large number of roofing assemblies. One example of certification report is report SOPI-246544-07-5100. .

RESISTANCE TO STATIC WIND UPLIFT — **FM 4470 (Drummondville)**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Drummondville, Québec, Canada
CERTIFICATE URL:

ISSUE DATE: 2012-01-01 00:00:00
EXPIRY DATE:

CERTIFIER OR LAB: FM Approvals (Factory Mutual)

CERTIFICATION AND COMPLIANCE NOTES: This product is present in a large number of roofing assemblies tested for resistance to wind uplift. FM Approvals Certificate Number 3010173. These listings are maintained through periodic audits from FM in the SOPREMA plants.

MANAGEMENT — **ISO 9001:2015 Quality management systems**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Facilities covered by this certification: St Julien du Sault, France; Strasbourg, France; Val de Reuil, France; Sorgues, France; Luynes, France; Ambert, France; Cestas, France; La Chapelle Saint Luc, France; Saint Rambert, France; Golbey, France; Drummondville, Québec, Canada; Chilliwack, British Columbia, Canada; Wadsworth, Ohio, USA; Richmond, Québec, Canada; Gulfport, Mississippi, USA; Beauport, Québec, Canada; Oberrosbach, Germany; Grobbendonk, Belgium; Andenne, Belgium; Ijlst, Netherlands; Chignolo d'Isola Bergamo, Italy; Frosinone, Italy; San Vito al Tagliamento, Italy; Verolanuova, Italy; Salgareda, Italy; Blonie, Poland; Spreitenbach, Switzerland; Cham, Switzerland.
CERTIFICATE URL: https://www.soprema.ca/wp-content/uploads/2021/10/SOPREMA-ISO-9001-EN-1.pdf

ISSUE DATE: 2024-06-11 00:00:00
EXPIRY DATE: 2027-05-07 00:00:00

CERTIFIER OR LAB: SGS ICS

CERTIFICATION AND COMPLIANCE NOTES: Certificate number FR18/81842815. Although all the plants cited above are covered by the certification, the only plant that manufactures the product covered by this HPD is the plant in Drummondville.

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.

DUOTACK
MANUFACTURER (OR GENERIC): **SOPREMA**

HPD URL: No HPD available
ACCESSORY TYPE: Adhesive
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: SOPRA-ISO can be installed by various methods. Installation with DUOTACK adhesive (0 g/L VOC content) is one of these methods. DUOTACK is installed in ribbons spaced as specified to obtain required wind uplift resistance. SOPRA-ISO panels are then laid in adhesive.

FASTENER
MANUFACTURER (OR GENERIC): **SOPREMA**

HPD URL: NO HPD available
ACCESSORY TYPE: Fastener
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: SOPRA-ISO can be installed by various methods. Installation with fasteners (screws and plates) is one of these methods. SOPRA-ISO boards are laid down and metal fasteners are screwed through the boards at spacing determined by the required wind uplift resistance.

HOT ASPHALT
MANUFACTURER (OR GENERIC): **SOPREMA**

HPD URL: No HPD available
ACCESSORY TYPE: Adhesive
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: SOPRA-ISO can be installed by various methods. Installation with hot asphalt is one of these methods. Asphalt is heated in a kettle to a liquid form and installed on the roof deck with a mop. SOPRA-ISO is then laid down on the asphalt. Upon cooling, asphalt solidifies and holds the boards.

Section 5: General Notes

Residuals could not be considered for all materials because information was not provided by all raw materials vendors.

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **Soprema**
ADDRESS: **1688 Jean-Berchmans-Michaud**
Drummondville, Québec J2C 8E9
COUNTRY: **Canada**

WEBSITE: **www.soprema.ca**
CONTACT NAME: **Jean-François Côté**
TITLE: **Director, Standards and Scientific Affairs**
PHONE: **819-478-8166 x.3290**
EMAIL: **jfcote@soprema.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
NoGS No GreenScreen.

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.