SOPRALENE FLAM 180
by Soprema

Health Product Declaration v2.3
created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 32705
CLASSIFICATION: 07 52 16.13 Torch-Applied Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing
PRODUCT DESCRIPTION: SOPRALENE FLAM 180 is a heat-welded base sheet membrane used in two-ply roofing assemblies. It is composed of SBS modified bitumen and is reinforced with a non-woven polyester mat.

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 4 of 5 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

SBS-MODIFIED BITUMEN MIXTURE [ASPHALT (ASPHALT) LT-1 | CAN | MAM | GEN **LIMESTONE; CALCIUM CARBONATE (LIMESTONE; CALCIUM CARBONATE)** BM-3dg **STYRENE BUTADIENE RUBBER (SBR) (STYRENE BUTADIENE RUBBER (SBR))** LT-UNK *LEAD (LEAD)* BM-1 | END | PBT | MUL | CAN | DEV | REP | GEN | MAM | AQU *POLYCYCLIC AROMATIC HYDROCARBONS (POLYCYCLIC AROMATIC HYDROCARBONS)* LT-1 | PBT | CAN *NAPHTHALENE (NAPHTHALENE)* LT-1 | END | PBT | CAN | MUL | AQU | EYE | MAM *VANADIUM (VANADIUM)* LT-1 | MUL | CAN | GEN *NICKEL (NICKEL)* LT-1 | CAN | RES | MUL | MAM | SKI | AQU *HYDROGEN SULFIDE (HYDROGEN SULFIDE)* LT-P1 | END | MUL | MAM | AQU | PHY | EYE **] SATURANT FOR POLYESTER REINFORCEMENT [ASPHALT, OXIDIZED (ASPHALT, OXIDIZED)** LT-1 | CAN | EYE *HYDROGEN SULFIDE (HYDROGEN SULFIDE)* LT-P1 | END | MUL | MAM | AQU | PHY | EYE *NICKEL (NICKEL)* LT-1 | CAN | RES | MUL | MAM | SKI | AQU *VANADIUM (VANADIUM)* LT-1 | MUL | CAN | GEN *LEAD (LEAD)* BM-1 | END | PBT | MUL | CAN | DEV | REP | GEN | MAM | AQU *POLYCYCLIC AROMATIC HYDROCARBONS (POLYCYCLIC AROMATIC HYDROCARBONS)* LT-1 | PBT | CAN *NAPHTHALENE (NAPHTHALENE)* LT-1 | END | PBT | CAN | MUL | AQU | EYE | MAM **] POLYESTER REINFORCING MAT [POLYESTER (POLYESTER)** NoGS **] POLYPROPYLENE FILM [POLYPROPYLENE (POLYPROPYLENE)** LT-P1 **] COLORED SAND [QUARTZ** BM-1 | CAN | MAM | GEN **2-(2-BUTOXYETHOXY)ETHANOL** LT-P1 | END | EYE | MAM **TRIETHOXY(ETHYL)SILANE** LT-UNK **]**

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:

No substance other than those listed in this HPD have been added to the finished product during its manufacturing. Residuals or impurities could not be considered because information was not provided to the manufacturer by the raw materials vendors. The precise composition of the SBS-modified-bitumen mixture was not disclosed to protect proprietary information; ranges were given.

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 V1.1 (Section 01350/CHPS) - Zero VOC emissions

Management: ISO 9001:2015 Quality management systems
Management: ISO 14001:2015 Environmental management systems
Management: ISO 45001:2018 Occupational health and safety management system

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: 2023-05-12
PUBLISHED DATE: 2023-05-12
EXPIRY DATE: 2026-05-12

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

SBS-MODIFIED BITUMEN MIXTURE %: 83.7000

MATERIAL THRESHOLD: 100 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: The modified bitumen is composed of different substances blended to a homogeneous mixture.

ASPHALT (ASPHALT) ID: 8052-42-4

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:40**

%: **45.0000 - 55.0000** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Water resistance**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification
CAN	IARC	Group 2b - Possibly carcinogenic to humans
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]
GEN	GHS - Japan	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]

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

SUBSTANCE NOTES: Exact percentage not disclosed to protect proprietary information.

LIMESTONE; CALCIUM CARBONATE (LIMESTONE; CALCIUM CARBONATE) ID: 1317-65-3

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:40**

%: **35.0000 - 50.0000** GreenScreen: **BM-3dg** RC: **None** NANO: **No** SUBSTANCE ROLE: **Filler**

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: Exact percentage not disclosed to protect proprietary information.

STYRENE BUTADIENE RUBBER (SBR) (STYRENE BUTADIENE RUBBER (SBR))

ID: 9003-55-8

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:41**

%: **5.0000 - 10.0000** 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: Exact percentage not disclosed to protect proprietary information.

LEAD (LEAD)

ID: 7439-92-1

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:41**

%: **Impurity/Residual** GreenScreen: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
PBT	OR DEQ - Priority Persistent Pollutants	Priority Persistent Pollutant - Tier 1
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
CAN	CA EPA - Prop 65	Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
DEV	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant
CAN	US EPA - IRIS Carcinogens	(1986) Group B2 - Probable human Carcinogen
CAN	IARC	Group 2a - Agent is probably Carcinogenic to humans
DEV	CA EPA - Prop 65	Developmental toxicity
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	US EPA - Toxics Release Inventory PBTs	PBT

DEV	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Developmental Toxicity
REP	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Reproductive Toxicity
REP	EU - Annex VI CMRs	Reproductive Toxicity - Category 1A
GEN	MAK	Germ Cell Mutagen 3a
REP	CA EPA - Prop 65	Reproductive Toxicity - Female
REP	CA EPA - Prop 65	Reproductive Toxicity - Male
CAN	GHS - Korea	H350 - May cause cancer [Carcinogenicity - Category 1]
REP	GHS - Korea	H360 - May damage fertility or the unborn child [Reproductive toxicity - Category 1]
REP	GHS - Japan	H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1A]
DEV	GHS - Australia	H360Df - May damage the unborn child. Suspected of damaging fertility [Reproductive toxicity - Category 1A or 1B]
REP	EU - GHS (H-Statements) Annex 6 Table 3-1	H360FD - May damage fertility. May damage the unborn child [Reproductive toxicity - Category 1A or 1B]
DEV	EU - GHS (H-Statements) Annex 6 Table 3-1	H362 - May cause harm to breast-fed children [Reproductive toxicity, effects on or via lactation]
REP	GHS - New Zealand	Reproductive toxicity category 1
CAN	GHS - New Zealand	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]
GEN	GHS - Australia	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]
GEN	GHS - Japan	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Australia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
AQU	GHS - Korea	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Korea	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
GEN	GHS - New Zealand	Germ cell mutagenicity category 2

MAM	GHS - New Zealand	Acute oral toxicity category 3
REP	GHS - New Zealand	Effects on or via lactation
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
REP	EU - SVHC List	Toxic to reproduction - Candidate list
REP	EU - REACH Annex XVII CMRs	Reproductive toxicants: Category 1A

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 Certain Metals
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Core Restrictions
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
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	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Footwear, Apparel & Jewelry Products
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2023 Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES: Lead may be present as an impurity in asphalt.

POLYCYCLIC AROMATIC HYDROCARBONS (POLYCYCLIC AROMATIC HYDROCARBONS)

ID: 130498-29-2

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:42**

%: **Impurity/Residual** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	WA DoE - PBT	PBT
PBT	US EPA - Toxics Release Inventory PBTs	PBT

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, 2023 Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES: Polycyclic aromatic hydrocarbons may be present as impurity in asphalt.

NAPHTHALENE (NAPHTHALENE)

ID: 91-20-3

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:42**

%: **Impurity/Residual** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
END	ChemSec - SIN List	Endocrine Disruption
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CAN	CA EPA - Prop 65	Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	WA DoE - PBT	PBT
PBT	US EPA - Toxics Release Inventory PBTs	PBT
CAN	US EPA - IRIS Carcinogens	(1986) Group C - Possible human Carcinogen

CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
EYE	GHS - New Zealand	Eye irritation category 2
CAN	GHS - New Zealand	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]
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
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Japan	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Japan	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - Australia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
CAN	GHS - Malaysia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
AQU	GHS - Malaysia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - Malaysia	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes of Problematic Chemicals Antimicrobials
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2023 Red List substances to avoid in Living Building Challenge V4.0 projects
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: Naphthalene may be present as an impurity in asphalt.

VANADIUM (VANADIUM)

ID: 7440-62-2

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:40**

%: **Impurity/Residual** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
GEN	MAK	Germ Cell Mutagen 2

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

SUBSTANCE NOTES: Vanadium may be present as an impurity in asphalt.

NICKEL (NICKEL)

ID: 7440-02-0

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:42**

%: **Impurity/Residual** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
CAN	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
CAN	GHS - New Zealand	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]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [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 - New Zealand	Skin sensitisation category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes of Problematic Chemicals Certain Metals
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
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Footwear, Apparel & Jewelry Products

SUBSTANCE NOTES: Nickel may be present as an impurity in asphalt.

HYDROGEN SULFIDE (HYDROGEN SULFIDE)

ID: 7783-06-4

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:42**

%: **Impurity/Residual** 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
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H220 - Extremely flammable gas [Flammable gases - Category 1]
EYE	GHS - New Zealand	Eye irritation category 2
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
MAM	GHS - New Zealand	Acute inhalation toxicity category 2
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Japan	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Japan	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]

AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
AQU	GHS - Korea	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
EYE	GHS - Korea	H319 - Causes serious eye irritation [Serious eye damage/irritation - Category 2]
MAM	Québec CSST - WHMIS 1988	Class D1A - Very toxic material causing immediate and serious toxic effects
MAM	GHS - Korea	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 2]
PHY	GHS - Korea	H220 - Extremely flammable gas [Flammable gases - Category 1]
PHY	Québec CSST - WHMIS 1988	Class B1 - Flammable gases
MAM	GHS - Australia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
AQU	GHS - Malaysia	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Australia	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
PHY	GHS - New Zealand	Flammable gas category 1A
PHY	GHS - Malaysia	H220 - Extremely flammable gas [Flammable gases - Category 1]
MAM	GHS - Malaysia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
PHY	GHS - Australia	H220 - Extremely flammable gas [Flammable gases - Category 1]

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

SUBSTANCE NOTES: Hydrogen sulfide may be present as an impurity in asphalt.

SATURANT FOR POLYESTER REINFORCEMENT

%: 10.0000 - 12.0000

MATERIAL THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

MATERIAL TYPE: Other: Asphalt derived from crude oil

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

OTHER MATERIAL NOTES: Saturant used to fill all voids within reinforcing mat.

ASPHALT, OXIDIZED (ASPHALT, OXIDIZED)

ID: 64742-93-4

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

HAZARD SCREENING DATE: **2023-05-12 10:54:43**

%: **100.0000** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Water resistance**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification
CAN	IARC	Group 2a - Agent is probably Carcinogenic to humans
EYE	GHS - Korea	H318 - Causes serious eye damage [Serious eye damage/irritation - Category 1]

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

SUBSTANCE NOTES: Oxidized asphalt is one option for reinforcement saturation.

HYDROGEN SULFIDE (HYDROGEN SULFIDE) ID: 7783-06-4

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:43**

%: **Impurity/Residual** 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
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H220 - Extremely flammable gas [Flammable gases - Category 1]
EYE	GHS - New Zealand	Eye irritation category 2
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
MAM	GHS - New Zealand	Acute inhalation toxicity category 2
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Japan	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Japan	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
AQU	GHS - Korea	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]

EYE	GHS - Korea	H319 - Causes serious eye irritation [Serious eye damage/irritation - Category 2]
MAM	Québec CSST - WHMIS 1988	Class D1A - Very toxic material causing immediate and serious toxic effects
MAM	GHS - Korea	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 2]
PHY	GHS - Korea	H220 - Extremely flammable gas [Flammable gases - Category 1]
PHY	Québec CSST - WHMIS 1988	Class B1 - Flammable gases
MAM	GHS - Australia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
AQU	GHS - Malaysia	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Australia	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
PHY	GHS - New Zealand	Flammable gas category 1A
PHY	GHS - Malaysia	H220 - Extremely flammable gas [Flammable gases - Category 1]
MAM	GHS - Malaysia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
PHY	GHS - Australia	H220 - Extremely flammable gas [Flammable gases - Category 1]

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

SUBSTANCE NOTES: Hydrogen sulfide may be present as an impurity in asphalt.

NICKEL (NICKEL)

ID: 7440-02-0

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:44**

%: **Impurity/Residual** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
CAN	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
CAN	GHS - New Zealand	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]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [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 - New Zealand	Skin sensitisation category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes of Problematic Chemicals Certain Metals
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
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Footwear, Apparel & Jewelry Products

SUBSTANCE NOTES: Nickel may be present as an impurity in asphalt.

VANADIUM (VANADIUM)

ID: 7440-62-2

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:44**

%: **Impurity/Residual** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
GEN	MAK	Germ Cell Mutagen 2

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

SUBSTANCE NOTES: Vanadium may be present as an impurity in asphalt.

LEAD (LEAD)

ID: 7439-92-1

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:45**

%: **Impurity/Residual** GreenScreen: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
PBT	OR DEQ - Priority Persistent Pollutants	Priority Persistent Pollutant - Tier 1

MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
CAN	CA EPA - Prop 65	Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
DEV	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant
CAN	US EPA - IRIS Carcinogens	(1986) Group B2 - Probable human Carcinogen
CAN	IARC	Group 2a - Agent is probably Carcinogenic to humans
DEV	CA EPA - Prop 65	Developmental toxicity
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	US EPA - Toxics Release Inventory PBTs	PBT
DEV	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Developmental Toxicity
REP	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Reproductive Toxicity
REP	EU - Annex VI CMRs	Reproductive Toxicity - Category 1A
GEN	MAK	Germ Cell Mutagen 3a
REP	CA EPA - Prop 65	Reproductive Toxicity - Female
REP	CA EPA - Prop 65	Reproductive Toxicity - Male
CAN	GHS - Korea	H350 - May cause cancer [Carcinogenicity - Category 1]
REP	GHS - Korea	H360 - May damage fertility or the unborn child [Reproductive toxicity - Category 1]
REP	GHS - Japan	H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1A]
DEV	GHS - Australia	H360Df - May damage the unborn child. Suspected of damaging fertility [Reproductive toxicity - Category 1A or 1B]
REP	EU - GHS (H-Statements) Annex 6 Table 3-1	H360FD - May damage fertility. May damage the unborn child [Reproductive toxicity - Category 1A or 1B]
DEV	EU - GHS (H-Statements) Annex 6 Table 3-1	H362 - May cause harm to breast-fed children [Reproductive toxicity, effects on or via lactation]
REP	GHS - New Zealand	Reproductive toxicity category 1
CAN	GHS - New Zealand	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]
GEN	GHS - Australia	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]

GEN	GHS - Japan	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Australia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
AQU	GHS - Korea	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Korea	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
GEN	GHS - New Zealand	Germ cell mutagenicity category 2
MAM	GHS - New Zealand	Acute oral toxicity category 3
REP	GHS - New Zealand	Effects on or via lactation
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
REP	EU - SVHC List	Toxic to reproduction - Candidate list
REP	EU - REACH Annex XVII CMRs	Reproductive toxicants: Category 1A

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 Certain Metals
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Core Restrictions
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
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	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Footwear, Apparel & Jewelry Products
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2023 Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES: Lead may be present as an impurity in asphalt.

POLYCYCLIC AROMATIC HYDROCARBONS (POLYCYCLIC AROMATIC HYDROCARBONS)

ID: 130498-29-2

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:46**

%: **Impurity/Residual** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	WA DoE - PBT	PBT
PBT	US EPA - Toxics Release Inventory PBTs	PBT

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, 2023 Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES: Polycyclic aromatic hydrocarbons may be present as an impurity in asphalt.

NAPHTHALENE (NAPHTHALENE)

ID: 91-20-3

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:43**

%: **Impurity/Residual** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
END	ChemSec - SIN List	Endocrine Disruption
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CAN	CA EPA - Prop 65	Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	WA DoE - PBT	PBT
PBT	US EPA - Toxics Release Inventory PBTs	PBT
CAN	US EPA - IRIS Carcinogens	(1986) Group C - Possible human Carcinogen

CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
EYE	GHS - New Zealand	Eye irritation category 2
CAN	GHS - New Zealand	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]
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
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Japan	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Japan	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - Australia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
CAN	GHS - Malaysia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
AQU	GHS - Malaysia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - Malaysia	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes of Problematic Chemicals Antimicrobials
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2023 Red List substances to avoid in Living Building Challenge V4.0 projects
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: Naphthalene may be present as an impurity in asphalt.

POLYESTER REINFORCING MAT %: 4.9000

MATERIAL THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: No MATERIAL TYPE: Polymeric Material

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

OTHER MATERIAL NOTES: Polyester reinforcing mat is responsible for the product's mechanical properties.

POLYESTER (POLYESTER) ID: 113669-95-7

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:44**

%: **100.0000** GreenScreen: **NoGS** 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: Polyester fibres in a non-woven configuration.

POLYPROPYLENE FILM %: 0.3000

MATERIAL THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: No MATERIAL TYPE: Polymeric Material

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

OTHER MATERIAL NOTES: Polypropylene film is used as the bottom surfacing material.

POLYPROPYLENE (POLYPROPYLENE)

ID: 9003-07-0

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:45**

%: **100.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Anti-adhesive 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
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: BOPP film.

COLORED SAND

%: **0.2000**

MATERIAL THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: No MATERIAL TYPE: Geologically Derived Material

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

OTHER MATERIAL NOTES: Colored sand is used to generate lay lines on top surface of this product.

QUARTZ

ID: 14808-60-7

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:45**

%: **98.0000 - 99.0000** GreenScreen: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Dye**

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: Residuals were not considered because information could not be disclosed to the manufacturer by the materials suppliers.

2-(2-BUTOXYETHOXY)ETHANOL

ID: 112-34-5

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:46**

%: **0.2000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Dye**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
EYE	GHS - New Zealand	Eye irritation category 2
EYE	GHS - Australia	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
EYE	GHS - Japan	H319 - Causes serious eye irritation [Serious eye damage / eye irritation - Category 2A]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes of Problematic Chemicals Some Solvents
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: Residuals were not considered because information could not be disclosed to the manufacturer by the materials suppliers.

TRIETHOXY(ETHYL)SILANE

ID: 78-07-9

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-05-12 10:54:44**

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

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: Residuals were not considered because information could not be disclosed to the manufacturer by the materials suppliers.

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 V1.1 (Section 01350/CHPS) - Zero VOC emissions**

CERTIFYING PARTY: Self-declared
APPLICABLE FACILITIES: N/A
CERTIFICATE URL:

ISSUE DATE: 2019-02-28
EXPIRY DATE:

CERTIFIER OR LAB: N/A

CERTIFICATION AND COMPLIANCE NOTES: N/A - This product is an exterior product therefore is not to be tested for VOC emissions.

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: 2021-09-23
EXPIRY DATE: 2024-05-07

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 plants that manufacture the product covered by this HPD are the plants in Drummondville and Chilliwack.

MANAGEMENT — **ISO 14001:2015 Environmental 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; La Chapelle Saint Luc, France; Saint Rambert, France; Golbey, France; Drummondville, Québec, Canada; Chilliwack, British Columbia, Canada; Wadsworth, Ohio, USA; Richmond, Québec, Canada; Beauport, Québec, Canada; Grobbendonk, Belgium; Andenne, Belgium; Ijlst, Netherlands; Chignolo d'Isola Bergamo, Italy; Frosinone, Italy; Salgareda, Italy; San Vito al Tagliamento, Italy; Verolanuova, Italy; Blonie, Poland; Spreitenbach, Switzerland; Cham, Switzerland.
CERTIFICATE URL: https://www.soprema.ca/wp-content/uploads/2021/10/SOPREMA-ISO-14001-EN-1.pdf

ISSUE DATE: 2021-09-23
EXPIRY DATE: 2024-05-07

CERTIFIER OR LAB: SGS ICS

CERTIFICATION AND COMPLIANCE NOTES: Certificate number FR18/81842816. Although all the plants cited above are covered by the certification, the only plants that manufacture the product covered by this HPD are the plants in Drummondville and Chilliwack.

MANAGEMENT — **ISO 45001:2018 Occupational health and safety management system**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Facilities covered by this certification: St Julien du Sault, France; Strasbourg, France; La Chapelle Saint Luc, France; Saint Rambert, France; Drummondville, Québec, Canada; Chilliwack, British Columbia, Canada; Beauport, Québec, Canada; Wadsworth, Ohio, USA; Gulfport, Mississippi, USA; Andenne, Belgium; Chignolo d'Isola Bergamo, Italy; Frosinone, Italy; San Vito al Tagliamento, Italy; Verolanuova, Italy; Salgareda, Italy.
CERTIFICATE URL: https://www.soprema.ca/wp-content/uploads/2021/10/SOPREMA-ISO-45001-EN-1.pdf

ISSUE DATE: 2021-09-23
EXPIRY DATE: 2024-05-07

CERTIFIER OR LAB: SGS ICS

CERTIFICATION AND COMPLIANCE NOTES: Certificate number FR18/81842817. Although all the plants cited above are covered by the certification, the only plants that manufacture the product covered by this HPD are the plants in Drummondville and Chilliwack.

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.

BITUMINOUS-BASED ROOFING PRIMER
MANUFACTURER (OR GENERIC): **SOPREMA**

HPD URL: No HPD Available
ACCESSORY TYPE: Installation Accessory
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: The use of a primer may be required or recommended depending on the type of substrate on which is installed SOPRALENE FLAM 180. Acceptable primers include ELASTOCOL 500 (340 g/L VOC content) and ELASTOCOL 350 (31 g/L VOC content).

Section 5: General Notes

Residuals could not be considered for all materials as information was not provided to the manufacturer by raw materials suppliers.

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **Soprema**
ADDRESS: **1688 Jean-Berchmans-Michaud**
Drummondville Quebec J2C 8E9, Canada
WEBSITE: **www.soprema.ca**

CONTACT NAME: **Jean-François Côté**
TITLE: **Director, Standards and Scientific Affairs**
PHONE: **877-626-6688 x114211**
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.