

HPD UNIQUE IDENTIFIER: 23682

CLASSIFICATION: 07 52 16.12 Hot-Mopped Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing

PRODUCT DESCRIPTION: ELASTOPHENE 180 PS is a SBS-modified bitumen base sheet used in low-slope roofing assemblies. It has a top surface burn-off film and a mineral surfaced underface to allow its installation in hot mopping asphalt. It is reinforced with a non-woven polyester mat.

Section 1: Summary

Nested Method / Material Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold level	Residuals/Impurities	<i>All Substances Above the Threshold Indicated Are:</i>
<input checked="" type="radio"/> Nested Materials Method	<input type="radio"/> 100 ppm	Residuals/Impurities	Characterized <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No
<input type="radio"/> Basic Method	<input checked="" type="radio"/> 1,000 ppm	Considered in 3 of 5 Materials	% weight and role provided for all substances.
Threshold Disclosed Per	<input type="radio"/> Per GHS SDS	Explanation(s) provided	Screened <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> Material	<input type="radio"/> Other	for Residuals/Impurities?	<i>All substances screened using Priority Hazard Lists with results disclosed.</i>
<input type="radio"/> Product		<input checked="" type="radio"/> Yes <input type="radio"/> No	Identified <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No
			<i>All substances disclosed by Name (Specific or Generic) and Identifier.</i>

CONTENT IN DESCENDING ORDER OF QUANTITY

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

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY

GREENSCREEN SCORE | HAZARD TYPE

SBS-MODIFIED BITUMEN MIXTURE [ASPHALT (ASPHALT) LT-1 | CAN LIMESTONE; CALCIUM CARBONATE (LIMESTONE; CALCIUM CARBONATE) LT-UNK STYRENE BUTADIENE RUBBER (SBR) (STYRENE BUTADIENE RUBBER (SBR)) LT-UNK HYDROGEN SULFIDE (HYDROGEN SULFIDE) LT-P1 | AQU | PHY | MAM | END | MUL NICKEL (NICKEL) LT-1 | RES | CAN | SKI | MAM | MUL VANADIUM (VANADIUM) LT-1 | MUL | CAN | GEN LEAD (LEAD) BM-1 | DEV | CAN | PBT | REP | MUL | END | GEN POLYCYCLIC AROMATIC HYDROCARBONS (POLYCYCLIC AROMATIC HYDROCARBONS) LT-1 | PBT | CAN NAPHTHALENE (NAPHTHALENE) LT-1 | CAN | PBT | AQU | MUL | END] SATURANT FOR POLYESTER REINFORCEMENT [ASPHALT, OXIDIZED (ASPHALT, OXIDIZED) LT-1 | CAN HYDROGEN SULFIDE (HYDROGEN SULFIDE) LT-P1 | AQU | PHY | MAM | END | MUL NICKEL (NICKEL) LT-1 | RES | CAN | SKI | MAM | MUL VANADIUM (VANADIUM) LT-1 | MUL | CAN | GEN LEAD (LEAD) BM-1 | DEV | CAN | PBT | REP | MUL | END | GEN POLYCYCLIC AROMATIC HYDROCARBONS (POLYCYCLIC AROMATIC HYDROCARBONS) LT-1 | PBT | CAN NAPHTHALENE (NAPHTHALENE) LT-1 | CAN | PBT | AQU | MUL | END] MINERAL AGGREGATE SURFACING [FELDSPAR (FELDSPAR) LT-UNK | RES ALUMINUM SILICATE, NATURAL (ALUMINUM SILICATE, NATURAL - FELDSPATH) LT-UNK QUARTZ (QUARTZ) LT-1 | CAN MICA (MICA) LT-UNK FERRIC OXIDE (FERRIC OXIDE) BM-1 | CAN SODIUM OXIDE (SODIUM OXIDE) LT-UNK DIPOTASSIUM OXIDE (DIPOTASSIUM OXIDE) LT-UNK CALCIUM OXIDE (CALCIUM OXIDE) LT-P1 MAGNESIUM OXIDE (MAGNESIUM OXIDE) LT-UNK | CAN] POLYESTER REINFORCING MAT [POLYESTER (POLYESTER) NoGS] POLYPROPYLENE FILM [POLYPROPYLENE LT-UNK]

Number of Greenscreen BM-4/BM3 contents ... 0

Contents highest concern GreenScreen

Benchmark or List translator Score ... 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 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: OHSAS-18001 Occupational Health and Safety

Assessment Standard

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients Option 1

Third Party Verified?

Yes

No

PREPARER: Self-Prepared

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2020-08-05

PUBLISHED DATE: 2021-02-04

EXPIRY DATE: 2023-08-05

Section 2: Content in Descending Order of Quantity

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

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

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.2, available on the HPDC website at: www.hpdc-collaborative.org/hpd-2-2-standard

SBS-MODIFIED BITUMEN MIXTURE %: 58.0000 - 62.0000

MATERIAL THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES CONSIDERED: 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 SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2020-08-05

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

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

LIMESTONE; CALCIUM CARBONATE (LIMESTONE; CALCIUM CARBONATE)

ID: 1317-65-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2020-08-05

%: 35.0000 - 50.0000 GS: LT-UNK RC: None NANO: No SUBSTANCE ROLE: Filler

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority 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 SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2020-08-05

%: 5.0000 - 10.0000 GS: LT-UNK RC: None NANO: No SUBSTANCE ROLE: Polymer species

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

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

HYDROGEN SULFIDE (HYDROGEN SULFIDE)

ID: 7783-06-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
AQU	EU - GHS (H-Statements)	H400 - Very toxic to aquatic life
PHY	EU - GHS (H-Statements)	H220 - Extremely flammable gas
MAM	EU - GHS (H-Statements)	H330 - Fatal if inhaled
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances

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

NICKEL (NICKEL)

ID: 7440-02-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
SKI	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
MAM	EU - GHS (H-Statements)	H372 - Causes damage to organs through prolonged or repeated exposure
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization

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

VANADIUM (VANADIUM)

ID: 7440-62-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2020-08-05		
%: Impurity/Residual	GS: LT-1	RC: None	NANO: No	SUBSTANCE ROLE: Impurity/Residual
HAZARD TYPE	AGENCY AND LIST TITLES	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		

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

LEAD (LEAD)

ID: 7439-92-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2020-08-05		
%: Impurity/Residual	GS: BM-1	RC: None	NANO: No	SUBSTANCE ROLE: Impurity/Residual
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
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
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
DEV	CA EPA - Prop 65	Developmental toxicity
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	WA DoE - PBT	PBT
REP	CA EPA - Prop 65	Reproductive Toxicity - Female
REP	CA EPA - Prop 65	Reproductive Toxicity - Male
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	US EPA - Toxics Release Inventory PBTs	PBT
REP	EU - SVHC Authorisation List	Toxic to reproduction - Candidate list
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
PBT	OR DEQ - Priority Persistent Pollutants	Priority Persistent Pollutant - Tier 1
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 - GHS (H-Statements)	H360FD - May damage fertility. May damage the unborn child
DEV	EU - GHS (H-Statements)	H362 - May cause harm to breast-fed children
REP	EU - REACH Annex XVII CMRs	Toxic to Reproduction Category 1 - Substances known to impair fertility or cause Developmental Toxicity in humans
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CAN	GHS - Korea	Carcinogenicity - Category 1 [H350 - May cause cancer]
REP	GHS - Korea	Reproductive toxicity - Category 1 [H360 - May damage fertility or the unborn child]
REP	GHS - New Zealand	6.8A - Known or presumed human reproductive or developmental toxicants
REP	GHS - Japan	Toxic to reproduction - Category 1A [H360]
GEN	MAK	Germ Cell Mutagen 3a
REP	EU - Annex VI CMRs	Reproductive Toxicity - Category 1A
DEV	GHS - Australia	H360Df - May damage the unborn child. Suspected of damaging fertility

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

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

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

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

NAPHTHALENE (NAPHTHALENE)

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	US EPA - IRIS Carcinogens	(1986) Group C - Possible human Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	WA DoE - PBT	PBT
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	US EPA - Toxics Release Inventory PBTs	PBT
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
AQU	EU - GHS (H-Statements)	H400 - Very toxic to aquatic life
AQU	EU - GHS (H-Statements)	H410 - Very toxic to aquatic life with long lasting effects
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
END	ChemSec - SIN List	Endocrine Disruption
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man

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

SATURANT FOR POLYESTER REINFORCEMENT

%: 17.0000 - 18.0000

MATERIAL THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES CONSIDERED: 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 SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2020-08-05

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	IARC	Group 2a - Agent is probably Carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

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

HYDROGEN SULFIDE (HYDROGEN SULFIDE)

ID: 7783-06-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
AQU	EU - GHS (H-Statements)	H400 - Very toxic to aquatic life
PHY	EU - GHS (H-Statements)	H220 - Extremely flammable gas
MAM	EU - GHS (H-Statements)	H330 - Fatal if inhaled
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances

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

NICKEL (NICKEL)

ID: 7440-02-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
SKI	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
MAM	EU - GHS (H-Statements)	H372 - Causes damage to organs through prolonged or repeated exposure
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization

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

VANADIUM (VANADIUM)

ID: 7440-62-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

HAZARD TYPE	AGENCY AND LIST TITLES	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

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

LEAD (LEAD)

ID: 7439-92-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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

CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
DEV	CA EPA - Prop 65	Developmental toxicity
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	WA DoE - PBT	PBT
REP	CA EPA - Prop 65	Reproductive Toxicity - Female
REP	CA EPA - Prop 65	Reproductive Toxicity - Male
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	US EPA - Toxics Release Inventory PBTs	PBT
REP	EU - SVHC Authorisation List	Toxic to reproduction - Candidate list
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
PBT	OR DEQ - Priority Persistent Pollutants	Priority Persistent Pollutant - Tier 1
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 - GHS (H-Statements)	H360FD - May damage fertility. May damage the unborn child
DEV	EU - GHS (H-Statements)	H362 - May cause harm to breast-fed children
REP	EU - REACH Annex XVII CMRs	Toxic to Reproduction Category 1 - Substances known to impair fertility or cause Developmental Toxicity in humans
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CAN	GHS - Korea	Carcinogenicity - Category 1 [H350 - May cause cancer]
REP	GHS - Korea	Reproductive toxicity - Category 1 [H360 - May damage fertility or the unborn child]
REP	GHS - New Zealand	6.8A - Known or presumed human reproductive or developmental toxicants
REP	GHS - Japan	Toxic to reproduction - Category 1A [H360]
GEN	MAK	Germ Cell Mutagen 3a
REP	EU - Annex VI CMRs	Reproductive Toxicity - Category 1A
DEV	GHS - Australia	H360Df - May damage the unborn child. Suspected of damaging fertility

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

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

MINERAL AGGREGATE SURFACING %: 14.0000 - 16.0000

MATERIAL THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES CONSIDERED: Yes MATERIAL TYPE: Geologically Derived Material

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

OTHER MATERIAL NOTES: Bottom surfacing material used to improve adhesion on substrate using hot asphalt.

FELDSPAR (FELDSPAR)

ID: 68476-25-5

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

%: **28.0000 - 32.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Anti-adhesive agent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced

SUBSTANCE NOTES: Mineral aggregate surfacing is composed of natural sand, which is composed of different minerals. Feldspar is one of these minerals.

ALUMINUM SILICATE, NATURAL (ALUMINUM SILICATE, NATURAL - FELDSPATH)

ID: 12141-46-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

%: **27.0000 - 31.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Anti-adhesive agent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Mineral aggregate surfacing is composed of natural sand, which is composed of different minerals. Feldspath is one of these minerals.

QUARTZ (QUARTZ)

ID: 14808-60-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

%: **26.0000 - 35.0000** GS: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Anti-adhesive agent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 1 - Agent is carcinogenic to humans - inhaled from occupational sources
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	GHS - New Zealand	6.7A - Known or presumed human carcinogens
CAN	GHS - Japan	Carcinogenicity - Category 1A [H350]
CAN	GHS - Australia	H350i - May cause cancer by inhalation

SUBSTANCE NOTES: Mineral aggregate surfacing is composed of natural sand, which is composed of different minerals. Quartz is one of these minerals.

MICA (MICA)

ID: 12001-26-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**
 %: **2.0000 - 5.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Anti-adhesive agent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Mineral aggregate surfacing is composed of natural sand, which is composed of different minerals. Mica is one of these minerals.

FERRIC OXIDE (FERRIC OXIDE)

ID: 1309-37-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**
 %: **Impurity/Residual** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

SUBSTANCE NOTES: Mineral aggregate surfacing is composed of natural sand, which is composed of different minerals. Iron oxide may be present as an impurity in natural sand.

SODIUM OXIDE (SODIUM OXIDE)

ID: 1313-59-3

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**
 %: **Impurity/Residual** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Mineral aggregate surfacing is composed of natural sand, which is composed of different minerals. Sodium oxide may be present as an impurity in natural sand.

DIPOTASSIUM OXIDE (DIPOTASSIUM OXIDE)

ID: 12136-45-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Mineral aggregate surfacing is composed of natural sand, which is composed of different minerals. Dipotassium oxide may be present as an impurity in natural sand.

CALCIUM OXIDE (CALCIUM OXIDE)

ID: 1305-78-8

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

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

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Mineral aggregate surfacing is composed of natural sand, which is composed of different minerals. Calcium oxide may be present as an impurity in natural sand.

MAGNESIUM OXIDE (MAGNESIUM OXIDE)

ID: 1309-48-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

POLYESTER REINFORCING MAT %: **7.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS	MATERIAL TYPE
MATERIAL THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES CONSIDERED: No		Polymeric Material
RESIDUALS AND IMPURITIES NOTES: Residuals were not considered because information could not be disclosed to the manufacturer by the materials suppliers.	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels	

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

POLYESTER (POLYESTER)

ID: 113669-95-7

SUBSTANCE NOTES: Mineral aggregate surfacing is composed of natural sand, which is composed of different minerals. Magnesium oxide may be present as an impurity in natural sand.

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

%: **100.0000** GS: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Structure component**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Polyester fibres in a non-woven configuration.

POLYPROPYLENE FILM

%: **0.4000**

MATERIAL THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES CONSIDERED: 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 top surfacing material.

POLYPROPYLENE

ID: 9003-07-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-08-05**

#: **100.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Anti-adhesive agent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: BOPP film.

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	ISSUE DATE: 2019-03-	EXPIRY DATE:	CERTIFIER OR LAB: N/A
APPLICABLE FACILITIES: N/A	01		
CERTIFICATE URL:			
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	ISSUE DATE: 2018-05-	EXPIRY DATE: 2021-	CERTIFIER OR LAB: SGS ICS
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.	28	05-07	
CERTIFICATE URL: https://www.soprema.ca/wp-content/uploads/2015/05/SOPREMA-certificat-iso-9001-v2-ENG.pdf			
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	ISSUE DATE: 2018-05-	EXPIRY DATE: 2021-	CERTIFIER OR LAB: SGS ICS
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.	28	05-07	
CERTIFICATE URL: https://www.soprema.ca/wp-content/uploads/2015/05/SOPREMA-certificat-iso-14001-v2-ENG.pdf			
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	OHSAS-18001 Occupational Health and Safety Assessment Standard
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CERTIFYING PARTY: Third Party

ISSUE DATE: 2018-05-28

EXPIRY DATE: 2021-05-07

CERTIFIER OR LAB: SGS ICS

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/2015/05/SOPREMA-certificat-ohsas-18001-v2-ENG.pdf>

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.

ROOFING CAP SHEET

HPD URL: <https://www.soprema.ca/fr/product/soprapstar-flam-gr-552/>

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

Various cap sheets can be used over ELASTOPHENE 180 PS. SOPRASTAR FLAM GR is one of these.

+ Section 5: General Notes

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

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

GreenScreen (GS)

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

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.