

HPD UNIQUE IDENTIFIER: 21099

CLASSIFICATION: 12 Furnishings

PRODUCT DESCRIPTION: Included in this HPD is the window shade fabric only. All assembly and system parts are excluded. A separate HPD covers those parts. This fabric can be used in roller shades and panel track applications to minimize the negative effects of the sun while preserving outward visibility. 4000 NET solar screen fabrics have an openness factor of 3% or 5% with a thickness of 0.029 in +/-5% or 0.027 in +/-5% respectively.

Section 1: Summary

Nested Method / Product 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

Residuals/Impurities
Considered in 8 of 8 Materials

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

All Substances Above the Threshold Indicated Are:

Characterized Yes Ex/SC Yes No
% weight and role provided for all substances.

Screened Yes Ex/SC Yes No
All substances screened using Priority Hazard Lists with results disclosed.

Identified Yes Ex/SC Yes No
All substances disclosed by Name (Specific or Generic) and 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.

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

PVC [**POLYVINYL CHLORIDE** **LT-P1** | RES **1,2-PROPANEDIOL, POLYMER WITH 1,1'-METHYLENEBIS(4-ISOCYANATOBENZENE), 2-METHYLOXIRANE AND OXIRANE** **NoGS** **1,3-BUTADIENE, 1-CHLORO-, POLYMER WITH 1,3-BUTADIENE AND 2-CHLORO-1,3-BUTADIENE** **LT-UNK** **2-BUTENE** **LT-UNK** | **PHY** **ACETYLENE** **LT-UNK** | **PHY** **BUTENE** **LT-UNK** **ETHYLENE DICHLORIDE (1,2-DICHLOROETHANE)** **BM-1** | CAN | PHY | SKI | EYE | MUL
HYDROCHLORIC ACID **BM-2** | RES | MAM **IRON** **LT-P1** | END **PROPYLENE** **BM-U** | PHY | END **SODIUM HYDROXIDE** **LT-P1** | SKI | PHY]
POLYETHYLENE TEREPHTHALATE [**POLYETHYLENE TEREPHTHALATE** **LT-UNK** **ANTIMONY TRIOXIDE** **BM-1** | CAN | MUL **MANGANESE OXIDE** **LT-P1** | REP **NITROGEN** **NoGS** **ZINC OXIDE** **BM-1** | RES | AQU | END | MUL]
PLASTICIZER [**DI(2-ETHYLHEXYL) TEREPHTHALATE** **BM-3dg** **2-ETHYLHEXYL METHYL TEREPHTHALATE** **NoGS**] **CALCIUM CARBONATE** [**CALCIUM CARBONATE** **BM-3**] **TITANIUM DIOXIDE** [**TITANIUM DIOXIDE** **LT-1** | CAN | END] **ZINC STEARATE** [**OCTADECANOIC ACID, ZINC SALT** **LT-P1**] **ANTIMONY OXIDE** [**ANTIMONY OXIDE (ANTIMONY TRIOXIDE)** **BM-1** | CAN | MUL **ANTIMONY, ELEMENTAL** **LT-1** | AQU | CAN **ANTIMONY TRISULFIDE** **LT-1** | AQU | CAN **ARSENIC, INORGANIC** **LT-1** | DEL | CAN | PBT | AQU | MAM | END | MUL | GEN **COPPER** **LT-P1** | MUL **IRON** **LT-P1** | END **LEAD** **BM-1** | DEL | CAN | PBT | REP | MUL | END | GEN **NICKEL (METALLIC)** **LT-1** | RES | CAN | SKI | MAM | MUL] **ZINC PYRITHIONE** [**ZINC PYRITHIONE** **BM-1tp** | MUL]

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

Contents highest concern GreenScreen Benchmark or List translator Score ... BM-1
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This HPD is reporting substances to 100 ppm for this product 4000 NET. Residuals and impurities were screened using the toxnet and Pharos databases. This database is a general database and lists possible residuals and impurities for chemicals and substances as reported in peer-reviewed studies or other credible documentation. Just because a chemical could have the impurity listed in the database does not mean that this material contains that impurity. Actual impurities are a product of the sourced product and its suppliers. Residuals and impurities listed in the HPD are for information purposes only and are not 100% guaranteed to be present in the fabric.

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: GreenGuard - Indoor Air Quality Certified

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: 2020-07-21

PUBLISHED DATE: 2020-07-23

EXPIRY DATE: 2023-07-21



Section 2: Content in Descending Order of Quantity

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

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

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

PVC

#: 40.0000 - 60.0000

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were considered using the toxnet database. For more information about this database see RESIDUALS AND IMPURITIES SCREENING NOTES.

OTHER MATERIAL NOTES: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORID

POLYVINYL CHLORIDE

ID: 9002-86-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2020-07-21

#: 40.0000 - 60.0000

GS: LT-P1

RC: UNK

NANO: No

SUBSTANCE ROLE: Coating

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

RESPIRATORY

AOEC - Asthmagens

Asthmagen (Rs) - sensitizer-induced

SUBSTANCE NOTES: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

1,2-PROPANEDIOL, POLYMER WITH 1,1'-METHYLENEBIS(4-ISOCYANATOBENZENE), 2-METHYLOXIRANE AND OXIRANE

ID: 68083-75-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2020-07-21

#: Impurity/Residual

GS: NoGS

RC: UNK

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: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

1,3-BUTADIENE, 1-CHLORO-, POLYMER WITH 1,3-BUTADIENE AND 2-CHLORO-1,3-BUTADIENE

ID: 31900-55-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual** GS: **LT-UNK** RC: **UNK** 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: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

2-BUTENE

ID: 107-01-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual** GS: **LT-UNK** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

PHYSICAL HAZARD (REACTIVE)

EU - GHS (H-Statements)

H220 - Extremely flammable gas

SUBSTANCE NOTES: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

ACETYLENE

ID: 74-86-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual** GS: **LT-UNK** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H220 - Extremely flammable gas

SUBSTANCE NOTES: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf> Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

BUTENE

ID: 25167-67-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2020-07-21

#: Impurity/Residual GS: LT-UNK RC: UNK 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: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

ETHYLENE DICHLORIDE (1,2-DICHLOROETHANE)

ID: 107-06-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2020-07-21

#: Impurity/Residual GS: BM-1 RC: UNK NANO: No SUBSTANCE ROLE: Impurity/Residual

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CANCER	US EPA - IRIS Carcinogens	(1986) Group B2 - Probable human Carcinogen
CANCER	IARC	Group 2b - Possibly carcinogenic to humans
CANCER	CA EPA - Prop 65	Carcinogen
CANCER	US CDC - Occupational Carcinogens	Occupational Carcinogen
CANCER	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
CANCER	EU - SVHC Authorisation List	Carcinogenic - Candidate list
CANCER	EU - SVHC Authorisation List	Carcinogenic - Banned unless Authorised
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H225 - Highly flammable liquid and vapour
SKIN IRRITATION	EU - GHS (H-Statements)	H315 - Causes skin irritation
EYE IRRITATION	EU - GHS (H-Statements)	H319 - Causes serious eye irritation
CANCER	EU - GHS (H-Statements)	H350 - May cause cancer
CANCER	EU - REACH Annex XVII CMRs	Carcinogen Category 2 - Substances which should be regarded as if they are Carcinogenic to man
MULTIPLE	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CANCER	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CANCER	GHS - Korea	Carcinogenicity - Category 1 [H350 - May cause cancer]
CANCER	EU - Annex VI CMRs	Carcinogen Category 1B - Presumed Carcinogen based on animal evidence
CANCER	GHS - Japan	Carcinogenicity - Category 1A [H350]
CANCER	GHS - Japan	Carcinogenicity - Category 1B [H350]
CANCER	GHS - Malaysia	H350 - May cause cancer
CANCER	GHS - Australia	H350 - May cause cancer

SUBSTANCE NOTES: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

HYDROCHLORIC ACID

ID: 7647-01-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

?: **Impurity/Residual**

GS: **BM-2**

RC: **UNK**

NANO: **No**

SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
RESPIRATORY	AOEC - Asthmagens	Asthmagen (Rr) - irritant-induced
MAMMALIAN	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances

SUBSTANCE NOTES: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

IRON

ID: 7439-89-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2020-07-21		
%: Impurity/Residual	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Impurity/Residual
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor		

SUBSTANCE NOTES: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

PROPYLENE

ID: 115-07-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2020-07-21		
%: Impurity/Residual	GS: BM-U	RC: UNK	NANO: No	SUBSTANCE ROLE: Impurity/Residual
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H220 - Extremely flammable gas		
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor		

SUBSTANCE NOTES: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

SODIUM HYDROXIDE

ID: 1310-73-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**HAZARD SCREENING DATE: **2020-07-21**

%: **Impurity/Residual** GS: **LT-P1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
SKIN IRRITATION	EU - GHS (H-Statements)	H314 - Causes severe skin burns and eye damage
PHYSICAL HAZARD (REACTIVE)	GHS - Korea	H290 - May be corrosive to metals

SUBSTANCE NOTES: Impurities: ACETYLENE <2.0 ppm; ACIDITY, AS HCL BY wt <0.5 ppm; ALKALINITY, AS NaOH BY wt <0.3 ppm; BUTADIENE <6.0 ppm; 1-BUTENE <3.0 ppm; 2-BUTENE <0.5% ppm; ETHYLENE <4.0 ppm; ETHYLENE DICHLORIDE (EDC) <10.0 ppm; PROPYLENE <8.0 ppm; IRON, BY wt <0.25 ppm/IMPURITY LEVEL IN VINYL CHLORIDE

Additional information about residuals can be found here. all are listed as occasional or rare without actual percentages: Tom Lent, Julie Silas, and Jim Vallette, Resilient Flooring & Chemical Hazards: A Comparative Analysis of Vinyl and Other Alternatives for Health Care, Healthy Building Network, April 2009. Available at: <http://www.healthybuilding.net/docs/HBN-ResilientFlooring&ChemicalHazards-Report.pdf>

POLYETHYLENE TEPHTHALATE

%: 10.0000 - 30.0000

PRODUCT THRESHOLD: **100 ppm**RESIDUALS AND IMPURITIES CONSIDERED: **Yes**MATERIAL TYPE: **Polymeric Material**

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were considered using the toxnet database. For more information about this database see RESIDUALS AND IMPURITIES SCREENING NOTES.

OTHER MATERIAL NOTES:

POLYETHYLENE TEREPHTHALATE

ID: 25038-59-9

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**HAZARD SCREENING DATE: **2020-07-21**

%: **10.0000 - 30.0000** GS: **LT-UNK** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Adhesive**

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

SUBSTANCE NOTES: Impurity 1, Antimony trioxide: "The prepolymer can also be formed by transesterification (B) of dimethyl terephthalate with ethylene glycol, forming methanol as a by-product (Scheirs and Long, 2003). Oxides of e.g. zinc or manganese are commonly added to catalyze the first reaction, and antimony (III) oxide is most commonly used to catalyze the second step reaction (Ravve, 2000; Stevens, 1999)." (Lithner 2011)

"Residual molecular antimony (Sb) catalyst materials can migrate into food or water and be a potential contaminant from PET packaging materials. Sb was established as a catalyst of choice because it has some favorable properties, e.g. it gives bright, shiny polymers. There are two other main catalysts for PET: germanium oxide and titanium compounds (Thiele 2001)."

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3613973/>

"Antimony trioxide is the preferred polycondensation catalyst for the production of PET."

"The Sb concentration of commercialized PET resin ranges between 190 and 300 µg g-1." http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-50532014000400009

Impurity 2, Manganese oxide: "Oxides of e.g. zinc or manganese are commonly added to catalyze the first reaction, and antimony (III) oxide is most commonly used to catalyze the second step reaction (Ravve, 2000; Stevens, 1999)." (Lithner 2011)

Impurity 3, Nitrogen: In the DMT process, "Vapor from the top of the methanol column is sent to a cold water (or refrigerated) condenser, where the condensate returns to the methanol column, and noncondensable are purged with nitrogen before being emitted to the atmosphere."

<http://www.epa.gov/ttn/chief/ap42/ch06/final/c06s06-2.pdf>

impurity 4, Zinc Oxide: "The prepolymer can also be formed by transesterification (B) of dimethyl terephthalate with ethylene glycol, forming methanol as a by-product (Scheirs and Long, 2003). Oxides of e.g. zinc or manganese are commonly added to catalyze the first reaction, and antimony (III) oxide is most commonly used to catalyze the second step reaction (Ravve, 2000; Stevens, 1999)." (Lithner 2011)

ANTIMONY TRIOXIDE

ID: 1309-64-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual** GS: **BM-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CANCER	IARC	Group 2b - Possibly carcinogenic to humans
CANCER	CA EPA - Prop 65	Carcinogen
CANCER	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
CANCER	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
MULTIPLE	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
CANCER	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CANCER	GHS - Japan	Carcinogenicity - Category 1B [H350]

SUBSTANCE NOTES: "The prepolymer can also be formed by transesterification (B) of dimethyl terephthalate with ethylene glycol, forming methanol as a by-product (Scheirs and Long, 2003). Oxides of e.g. zinc or manganese are commonly added to catalyze the first reaction, and antimony (III) oxide is most commonly used to catalyze the second step reaction (Ravve, 2000; Stevens, 1999)." (Lithner 2011)

"Residual molecular antimony (Sb) catalyst materials can migrate into food or water and be a potential contaminant from PET packaging materials. Sb was established as a catalyst of choice because it has some favorable properties, e.g. it gives bright, shiny polymers. There are two other main catalysts for PET: germanium oxide and titanium compounds (Thiele 2001)."

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3613973/>

"Antimony trioxide is the preferred polycondensation catalyst for the production of PET." "The Sb concentration of commercialized PET resin ranges between 190 and 300 µg g-1." http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-50532014000400009

MANGANESE OXIDE

ID: 1317-34-6

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual** GS: **LT-P1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
REPRODUCTIVE	GHS - Japan	Toxic to reproduction - Category 1B [H360]

SUBSTANCE NOTES: "Oxides of e.g. zinc or manganese are commonly added to catalyze the first reaction, and antimony (III) oxide is most commonly used to catalyze the second step reaction (Ravve, 2000; Stevens, 1999)." (Lithner 2011)

NITROGEN

ID: **7727-37-9**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual** GS: **NoGS** RC: **UNK** 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: In the DMT process, "Vapor from the top of the methanol column is sent to a cold water (or refrigerated) condenser, where the condensate returns to the methanol column, and noncondensable are purged with nitrogen before being emitted to the atmosphere."
<http://www.epa.gov/ttn/chief/ap42/ch06/final/c06s06-2.pdf>

ZINC OXIDE

ID: **1314-13-2**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual** GS: **BM-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
RESPIRATORY	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
ACUTE AQUATIC	EU - GHS (H-Statements)	H400 - Very toxic to aquatic life
CHRON AQUATIC	EU - GHS (H-Statements)	H410 - Very toxic to aquatic life with long lasting effects
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters

SUBSTANCE NOTES: "The prepolymer can also be formed by transesterification (B) of dimethyl terephthalate with ethylene glycol, forming methanol as a by-product (Scheirs and Long, 2003). Oxides of e.g. zinc or manganese are commonly added to catalyze the first reaction, and antimony (III) oxide is most commonly used to catalyze the second step reaction (Ravve, 2000; Stevens, 1999)." (Lithner 2011)

PLASTICIZER

#: **10.0000 - 20.0000**

PRODUCT THRESHOLD: **100 ppm** RESIDUALS AND IMPURITIES CONSIDERED: **Yes** MATERIAL TYPE: **Polymeric Material**

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were considered using the toxnet database. For more information about this database see RESIDUALS AND IMPURITIES SCREENING NOTES.

OTHER MATERIAL NOTES:

DI(2-ETHYLHEXYL) TEREPHTHALATE

ID: 6422-86-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **10.0000 - 20.0000**

GS: **BM-3dg**

RC: **UNK**

NANO: **No**

SUBSTANCE ROLE: **Plasticizer**

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: "DEHT is a clear liquid at room temperature and is manufactured at >98% purity. Minor impurities (present at <2%) include 2-ethylhexyl methyl terephthalate (CAS Registry No.: 63468-13-3)." (SIDS)

2-ETHYLHEXYL METHYL TEREPHTHALATE

ID: 63468-13-3

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual**

GS: **NoGS**

RC: **UNK**

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: "DEHT is a clear liquid at room temperature and is manufactured at >98% purity. Minor impurities (present at <2%) include 2-ethylhexyl methyl terephthalate (CAS Registry No.: 63468-13-3)." (SIDS)

CALCIUM CARBONATE

#: **5.0000 - 20.0000**

PRODUCT THRESHOLD: **100 ppm**

RESIDUALS AND IMPURITIES CONSIDERED: **Yes**

MATERIAL TYPE: **Geologically Derived Material**

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were considered using the toxnet database. For more information about this database see RESIDUALS AND IMPURITIES SCREENING NOTES.

OTHER MATERIAL NOTES: **Impurity Notes:** Ideally, the secondary crushing step should reduce the ore to the point where mineral impurities are liberated, typically <100 um, without producing an excess of fines. The material may then be beneficiated through a mineral flotation process in which impurities are floated out.

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **5.0000 - 20.0000**

GS: **BM-3**

RC: **UNK**

NANO: **No**

SUBSTANCE ROLE: **Filler**

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

SUBSTANCE NOTES: Ideally, the secondary crushing step should reduce the ore to the point where mineral impurities are liberated, typically <100 um, without producing an excess of fines. The material may then be beneficiated through a mineral flotation process in which impurities are floated out.

TITANIUM DIOXIDE

#: **1.0000 - 10.0000**

PRODUCT THRESHOLD: **100 ppm**

RESIDUALS AND IMPURITIES CONSIDERED: **Yes**

MATERIAL TYPE: **Geologically Derived Material**

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were considered using the toxnet database. For more information about this database see RESIDUALS AND IMPURITIES SCREENING NOTES.

OTHER MATERIAL NOTES: Impurity Notes: Relatively pure titanium oxide hydrate (TiO(OH)2 or TiO2 dihydrate) is precipitated by hydrolysis of this titanyl sulfate solution. Impurities are largely removed in further purification stages.

TITANIUM DIOXIDE

ID: 13463-67-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **1.0000 - 10.0000**

GS: **LT-1**

RC: **UNK**

NANO: **No**

SUBSTANCE ROLE: **Pigment**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CANCER	US CDC - Occupational Carcinogens	Occupational Carcinogen
CANCER	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CANCER	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CANCER	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value
CANCER	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels

SUBSTANCE NOTES: Relatively pure titanium oxide hydrate (TiO(OH)2 or TiO2 dihydrate) is precipitated by hydrolysis of this titanyl sulfate solution. Impurities are largely removed in further purification stages.

ZINC STEARATE

#: 0.5000 - 5.0000

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were considered using the toxnet database. For more information about this database see RESIDUALS AND IMPURITIES SCREENING NOTES.

OTHER MATERIAL NOTES:

OCTADECANOIC ACID, ZINC SALT

ID: 557-05-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2020-07-21

#: 0.5000 - 5.0000

GS: LT-P1

RC: UNK

NANO: No

SUBSTANCE ROLE: Heat or UV stabilizer

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES:

ANTIMONY OXIDE

#: 0.5000 - 5.0000

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were considered using the toxnet database. For more information about this database see RESIDUALS AND IMPURITIES SCREENING NOTES.

OTHER MATERIAL NOTES: Trace impurities such as arsenic, copper, iron, lead, and nickel. All are below the threshold level.

ANTIMONY OXIDE (ANTIMONY TRIOXIDE)

ID: 1309-64-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2020-07-21

#: 0.5000 - 5.0000

GS: BM-1

RC: UNK

NANO: No

SUBSTANCE ROLE: Flame retardant

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

CANCER

IARC

Group 2b - Possibly carcinogenic to humans

CANCER

CA EPA - Prop 65

Carcinogen

CANCER

US NIH - Report on Carcinogens

Reasonably Anticipated to be Human Carcinogen

CANCER

EU - GHS (H-Statements)

H351 - Suspected of causing cancer

MULTIPLE

ChemSec - SIN List

CMR - Carcinogen, Mutagen &/or Reproductive Toxicant

CANCER

MAK

Carcinogen Group 2 - Considered to be carcinogenic for man

CANCER

GHS - Japan

Carcinogenicity - Category 1B [H350]

SUBSTANCE NOTES: Trace impurities such as arsenic, copper, iron, lead, and nickel.

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-07-21**%: **Impurity/Residual** GS: **LT-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CHRON AQUATIC	EU - GHS (H-Statements)	H411 - Toxic to aquatic life with long lasting effects
CANCER	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man

SUBSTANCE NOTES: "Common methods of preparation include direct combination of metallic antimony with air or oxygen, roasting of antimony trisulfide, and alkaline hydrolysis of an antimony trihalide and subsequent dehydration of the resulting hydrous oxide." [Kirk-Othmer Encyclopedia of Chemical Technology. 4th ed. Volumes 1: New York, NY. John Wiley and Sons, 1991-Present., p. V3 385]

ANTIMONY TRISULFIDE

ID: 1345-04-6

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-07-21**%: **Impurity/Residual** GS: **LT-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CHRON AQUATIC	EU - GHS (H-Statements)	H411 - Toxic to aquatic life with long lasting effects
CANCER	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man

SUBSTANCE NOTES: "Common methods of preparation include direct combination of metallic antimony with air or oxygen, roasting of antimony trisulfide, and alkaline hydrolysis of an antimony trihalide and subsequent dehydration of the resulting hydrous oxide." [Kirk-Othmer Encyclopedia of Chemical Technology. 4th ed. Volumes 1: New York, NY. John Wiley and Sons, 1991-Present., p. V3 385]

ARSENIC, INORGANIC

ID: 7440-38-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-07-21**%: **Impurity/Residual** GS: **LT-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
DEVELOPMENTAL	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant
CANCER	US EPA - IRIS Carcinogens	(1986) Group A - Human Carcinogen
CANCER	IARC	Group 1 - Agent is Carcinogenic to humans
CANCER	CA EPA - Prop 65	Carcinogen
CANCER	US CDC - Occupational Carcinogens	Occupational Carcinogen
CANCER	US NIH - Report on Carcinogens	Known to be a human Carcinogen
PBT	OR DEQ - Priority Persistent Pollutants	Priority Persistent Pollutant - Tier 1
ACUTE AQUATIC	EU - GHS (H-Statements)	H400 - Very toxic to aquatic life
CHRON AQUATIC	EU - GHS (H-Statements)	H410 - Very toxic to aquatic life with long lasting effects
MAMMALIAN	EU - GHS (H-Statements)	H301 - Toxic if swallowed
MAMMALIAN	EU - GHS (H-Statements)	H331 - Toxic if inhaled
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CANCER	MAK	Carcinogen Group 1 - Substances that cause cancer in man
MAMMALIAN	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances
CANCER	GHS - Korea	Carcinogenicity - Category 1 [H350 - May cause cancer]
CANCER	GHS - New Zealand	6.7A - Known or presumed human carcinogens
CANCER	GHS - Japan	Carcinogenicity - Category 1A [H350]
GENE MUTATION	MAK	Germ Cell Mutagen 3a
CANCER	GHS - Australia	H350 - May cause cancer

SUBSTANCE NOTES:

COPPER

ID: 7440-50-8

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual**

GS: **LT-P1**

RC: **UNK**

NANO: **No**

SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters

SUBSTANCE NOTES:

IRON

ID: 7439-89-6

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual** GS: **LT-P1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

SUBSTANCE NOTES:

LEAD

ID: 7439-92-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual** GS: **BM-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
DEVELOPMENTAL	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant
CANCER	US EPA - IRIS Carcinogens	(1986) Group B2 - Probable human Carcinogen
CANCER	IARC	Group 2a - Agent is probably Carcinogenic to humans
CANCER	IARC	Group 2b - Possibly carcinogenic to humans
CANCER	CA EPA - Prop 65	Carcinogen
DEVELOPMENTAL	CA EPA - Prop 65	Developmental toxicity
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	WA DoE - PBT	PBT
REPRODUCTIVE	CA EPA - Prop 65	Reproductive Toxicity - Female
REPRODUCTIVE	CA EPA - Prop 65	Reproductive Toxicity - Male
CANCER	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	US EPA - Toxics Release Inventory PBTs	PBT
REPRODUCTIVE	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
DEVELOPMENTAL	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Developmental Toxicity
REPRODUCTIVE	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Reproductive Toxicity
REPRODUCTIVE	EU - GHS (H-Statements)	H360FD - May damage fertility. May damage the unborn child
DEVELOPMENTAL	EU - GHS (H-Statements)	H362 - May cause harm to breast-fed children

REPRODUCTIVE	EU - REACH Annex XVII CMRs	Toxic to Reproduction Category 1 - Substances known to impair fertility or cause Developmental Toxicity in humans
MULTIPLE	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CANCER	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CANCER	GHS - Korea	Carcinogenicity - Category 1 [H350 - May cause cancer]
REPRODUCTIVE	GHS - Korea	Reproductive toxicity - Category 1 [H360 - May damage fertility or the unborn child]
REPRODUCTIVE	GHS - New Zealand	6.8A - Known or presumed human reproductive or developmental toxicants
REPRODUCTIVE	GHS - Japan	Toxic to reproduction - Category 1A [H360]
GENE MUTATION	MAK	Germ Cell Mutagen 3a
REPRODUCTIVE	EU - Annex VI CMRs	Reproductive Toxicity - Category 1A
DEVELOPMENTAL	GHS - Australia	H360Df - May damage the unborn child. Suspected of damaging fertility

SUBSTANCE NOTES:

NICKEL (METALLIC)

ID: 7440-02-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **Impurity/Residual**

GS: **LT-1**

RC: **UNK**

NANO: **No**

SUBSTANCE ROLE: **Impurity/Residual**

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

SUBSTANCE NOTES:

ZINC PYRITHIONE

%: 0.1000 - 1.0000

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were considered using the toxnet database. For more information about this database see RESIDUALS AND IMPURITIES SCREENING NOTES.

OTHER MATERIAL NOTES:

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-07-21**

#: **0.1000 - 1.0000**

GS: **BM-1tp**

RC: **UNK**

NANO: **No**

SUBSTANCE ROLE: **Biocide**

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

MULTIPLE

German FEA - Substances Hazardous to Waters

Class 3 - Severe Hazard to Waters

SUBSTANCE NOTES:

Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

VOC EMISSIONS

GreenGuard - Indoor Air Quality Certified

CERTIFYING PARTY: **Third Party**

ISSUE DATE: **2011-**

EXPIRY DATE: **2022-**

CERTIFIER OR LAB: **UL**

APPLICABLE FACILITIES: **This is not facility specific**

12-22

12-22

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES: **Certificate #: 75180-410**

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.

CONTRACT SERIES TWO SHADING SYSTEM

HPD URL: <https://hpdrepository.hpd->

collaborative.org/repository/HPDs/430_Rollease_Acmeda_Contract_Series_Two_Shading_System.pdf

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

This is the shading system.

Section 5: General Notes

This inventory is reported to 100 ppm with possible residuals and impurities noted. This HPD is reporting substances to 100 ppm for this product 4000 NET. Residuals and impurities were screened using the toxnet and Pharos databases. This database is a general database and lists possible residuals and impurities for chemicals and substances as reported in peer-reviewed studies or other credible documentation. Just because a chemical could have the impurity listed in the database does not mean that this material contains that impurity. Actual impurities are a product of the sourced product and its suppliers. Residuals and impurities listed in the HPD are for information purposes only and are not 100% guaranteed to be present in the fabric.



MANUFACTURER INFORMATION

MANUFACTURER: **Rollease Acmeda**

ADDRESS: **200 Harvard Ave**

Stamford CT 06902, USA

WEBSITE: **<http://www.rolleseeacmeda.com/us/home>**

CONTACT NAME: **Lindsey DeSalvo**

TITLE: **Product Manager-Fabric**

PHONE: **203-590-5259**

EMAIL: **lindsey.desalvo@rolleseeacmeda.com**

The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.

KEY

Hazard Types

AQU Aquatic toxicity

CAN Cancer

DEV Developmental toxicity

END Endocrine activity

EYE Eye irritation/corrosivity

GEN Gene mutation

GLO Global warming

LAN Land toxicity

MAM Mammalian/systemic/organ toxicity

MUL Multiple

NEU Neurotoxicity

NF Not found on Priority Hazard Lists

OZO Ozone depletion

PBT Persistent, bioaccumulative, and toxic

PHY Physical hazard (flammable or reactive)

REP Reproductive

RES Respiratory sensitization

SKI Skin sensitization/irritation/corrosivity

UNK Unknown

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)

BM-3 Benchmark 3 (use but still opportunity for improvement)

BM-2 Benchmark 2 (use but search for safer substitutes)

BM-1 Benchmark 1 (avoid - chemical of high concern)

BM-U Benchmark Unspecified (due to insufficient data)

LT-P1 List Translator Possible 1 (Possible Benchmark-1)

LT-1 List Translator 1 (Likely Benchmark-1)

LT-UNK List Translator Benchmark Unknown (the chemical is present on at least one GreenScreen Specified List, but the information contained within the list did not result in a clear mapping to a LT-1 or LTP1 score.)

NoGS No GreenScreen.

Recycled Types

PreC Pre-consumer recycled content

PostC Post-consumer recycled content

UNK Inclusion of recycled content is unknown

None Does not include recycled content

Other Terms:

GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Inventory Methods:

Nested Method / Material Threshold Substances listed within each material per threshold indicated per material

Nested Method / Product Threshold Substances listed within each material per threshold indicated per product

Basic Method / Product Threshold Substances listed individually per threshold indicated per product

Nano Composed of nano scale particles or nanotechnology

Third Party Verified Verification by independent certifier approved by HPDC

Preparer Third party preparer, if not self-prepared by manufacturer

Applicable facilities Manufacturing sites to which testing applies

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.