

CLASSIFICATION: 122400

PRODUCT DESCRIPTION: PUROLUX is Alkenz's TPO solar control fabric and was developed starting with the core yarns made from the same family of compounds. It is designed to preserve energy by providing the same solar heat and glare control properties as traditional PVC sunscreens. It is also designed to provide a comfortable indoor environment with soft natural light while improving daytime privacy.

Section 1: Summary

Basic 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
- Per OSHA MSDS
- Other

Residuals/Impurities

- Considered
- Partially Considered
- Not Considered

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

One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.

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

PUROLUX [UNDISCLOSED LT-UNK UNDISCLOSED LT-UNK UNDISCLOSED BM-1 |
PBT ANTIMONY TRIOXIDE BM-1 | CAN | MUL UNDISCLOSED LT-1 | CAN | END
UNDISCLOSED LT-UNK UNDISCLOSED LT-P1 | MUL]

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:

Residual monomers were completely considered. None of the monomers in the resins are hazardous to humans or the environment.

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 - Gold (previously Children & Schools)
Multi-attribute: Cradle to Cradle Certified - Bronze (V3.1)
Other: OEKO-TEX Standard 100

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: 2019-12-09

PUBLISHED DATE: 2019-12-19

EXPIRY DATE: 2022-12-09



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 2.1.1, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-1-1-standard

PUROLUX

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Residual monomers were considered for the assessment.

OTHER PRODUCT NOTES: None of the monomers are hazardous to human health or the environment

UNDISCLOSED

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-12-09

#: 50.00 - 70.00

GS: LT-UNK

RC: None

NANO: No

ROLE: TPO Base Resin

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: This is a polyolefin copolymer

UNDISCLOSED

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-12-09

#: 15.00 - 30.00

GS: LT-UNK

RC: None

NANO: No

ROLE: PP elastomer

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: This is a polyolefin elastomer

UNDISCLOSED

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-12-09

#: 5.00 - 20.00

GS: BM-1

RC: None

NANO: No

ROLE: Flame Retardant

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

PBT

OSPAR - Priority PBTs & EDs & equivalent concern

PBT - Chemical for Priority Action

PBT

ChemSec - SIN List

PBT / vPvB (Persistent, Bioaccumulative, & Toxic / very Persistent & very Bioaccumulative)

PBT

EHP - San Antonio Statement on BFRs & CFRs

Flame retardant substance class of concern for PB&T & long range transport

SUBSTANCE NOTES: This is the main flame retardant additive

ANTIMONY TRIOXIDE

ID: 1309-64-4

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

HAZARD SCREENING DATE: **2019-12-09**

%: **5.00 - 15.00** GS: **BM-1** RC: **None** NANO: **No** ROLE: **Flame Retardant Synergist**

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: This is a synergist that works together with the other FR molecule

UNDISCLOSED

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

HAZARD SCREENING DATE: **2019-12-09**

%: **1.00 - 5.00** GS: **LT-1** RC: **None** NANO: **No** 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: This is an inorganic pigment additive

UNDISCLOSED

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

HAZARD SCREENING DATE: **2019-12-09**

%: **0.10 - 2.00** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Antioxidant**

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

SUBSTANCE NOTES: This is a phenolic antioxidant additive

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

HAZARD SCREENING DATE: **2019-12-09**

%: **0.10 - 2.00**

GS: **LT-P1**

RC: **None**

NANO: **No**

ROLE: **UV Stabilizer**

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

MULTIPLE

German FEA - Substances Hazardous to Waters

Class 2 - Hazard to Waters

SUBSTANCE NOTES: **This is a UV Stabilizer additive**

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 - Gold (previously Children & Schools)

CERTIFYING PARTY: **Third Party**

ISSUE DATE: **2020-01-15**

EXPIRY DATE:

CERTIFIER OR LAB: **UL**

APPLICABLE FACILITIES: **91 Gasan-ro, Jinyeong-eup Gimhae-si, Gyeongnam S.Korea 50849**

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES: **GreenGuard GOLD is in process of renewal with expected certification in January 2020**

MULTI-ATTRIBUTE

Cradle to Cradle Certified - Bronze (V3.1)

CERTIFYING PARTY: **Third Party**

APPLICABLE FACILITIES: **HQ/Factory: 91 Gasan-ro, Jinyeong-eup, Gimhae-si, Gyeongnam, S.Korea 50849**

CERTIFICATE URL:

https://cdn.c2ccertified.org/Certifications/ALKENZ_CO._LTD/PUROLUX/ALKEN_PUROL_Bronz_CERT3921_2019-03-05.pdf

ISSUE DATE:	EXPIRY DATE:	CERTIFIER OR LAB:
2019-03-05	2021-03-04	Cradle to Cradle Products Innovation Institute

CERTIFICATION AND COMPLIANCE NOTES:

OTHER

OEKO-TEX Standard 100

CERTIFYING PARTY: **Third Party**

ISSUE DATE: **2019-04-17**

EXPIRY DATE: **2020-04-15**

CERTIFIER OR LAB: **Oeko-Tex**

APPLICABLE FACILITIES: **HQ/Factory: 91 Gasan-ro, Jinyeong-eup, Gimhae-si, Gyeongnam, S.Korea 50849**

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES:

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

No accessories are required for this product.

Section 5: General Notes

Residual monomers were completely considered. None of the monomers in the resins are hazardous to humans or the environment.



MANUFACTURER INFORMATION

MANUFACTURER: **alkenz**
 ADDRESS: **91 Gasan-ro, Jinyeong-eup
 Gimhae-si Gyeongnam 50849, South Korea**
 WEBSITE: **www.alkenz.com**

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 TITLE: **Head of Sales & Marketing**
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KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

AQU Aquatic toxicity	GLO Global warming	PHY Physical Hazard (reactive)
CAN Cancer	MAM Mammalian/systemic/organ toxicity	REP Reproductive toxicity
DEV Developmental toxicity	MUL Multiple hazards	RES Respiratory sensitization
END Endocrine activity	NEU Neurotoxicity	SKI Skin sensitization/irritation/corrosivity
EYE Eye irritation/corrosivity	OZO Ozone depletion	LAN Land Toxicity
GEN Gene mutation	PBT Persistent Bioaccumulative Toxic	NF Not found on Priority Hazard Lists

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)	LT-P1 List Translator Possible Benchmark 1
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-1 List Translator Likely Benchmark 1
BM-2 Benchmark 2 (use but search for safer substitutes)	LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
BM-1 Benchmark 1 (avoid - chemical of high concern)	NoGS Unknown (no data on List Translator Lists)
BM-U Benchmark Unspecified (insufficient data to benchmark)	

Recycled Types

PreC Preconsumer (Post-Industrial)
PostC Postconsumer
Both Both Preconsumer and Postconsumer
Unk Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms

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.