

HPD UNIQUE IDENTIFIER: 1288504320

CLASSIFICATION: 07 50 00 Membrane Roofing

PRODUCT DESCRIPTION: The Texlon® System is based on the following principle: pneumatically or mechanically pre-stressed stabilised foil elements are fixed to a sub-structure by means of an aluminium frame system. The system can consist of single to five layers of ETFE foil (ethylene tetrafluoroethylene) depending on the building physics, static or design requirements and specifications. g-values and U-values are determined by the number of layers, the color and the type of coating. The thickness of the ETFE foils varies between 80 µm and 350 µm according to the requirements of the structural analysis. The individual layers are welded together into a cushion and stabilised to approximately 250 Pa (250 N/m²) by means of a low-pressure air system. This HPD is based on a typical 3-layer foil system: Upper layer: 250 µm // Middle layer: 100 µm // Lower layer: 250 µm

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities Evaluation	For all contents above the threshold, the manufacturer has:
☐ Nested Materials Method	☐ 100 ppm	☐ Completed	Characterized ☒ Yes ☐ No
☒ Basic Method	☐ 1,000 ppm	☒ Partially Completed	<i>Provided weight and role.</i>
	☒ Per GHS SDS	☐ Not Completed	Screened ☐ Yes ☒ No
	☐ Other		<i>Provided screening results using HPDC-approved methods.</i>
Threshold Disclosed Per	Explanation(s) provided :		Identified ☐ Yes ☒ No
☐ Material	☒ Yes ☐ No		<i>Provided name and CAS RN or other identifier.</i>
☒ Product			

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.

PRODUCT | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE
TEXLON SYSTEM | ALUMINUM BM-1 | END | PHY | MAM
POLY(ETHYLENE-TETRAFLUOROETHYLENE) NoGS
POLYDIMETHYLSILOXANES (PRIMARY CASRN IS 63148-62-9) LT-P1 |
PBT SILICA, AMORPHOUS (PRIMARY CASRN IS 7631-86-9) BM-1 |
CAN | MAM MAGNESIUM LT-UNK | PHY | MAM | SKI | EYE SILICON,
ELEMENTAL LT-UNK CALCIUM STEARATE LT-UNK IRON,
ELEMENTAL LT-P1 | END ZINC, ELEMENTAL LT-P1 | END | MUL | PHY
| AQU UNKNOWN Not Screened MANGANESE LT-P1 | END | MUL |
REP | MAM | AQU COPPER LT-P1 | MUL | AQU | GEN | MAM | EYE | SKI
CHROMIUM LT-P1 | END | SKI | MAM | REP | RES CARBON BLACK
BM-1 | CAN | EYE | MAM | PHY CALCIUM CARBONATE BM-3 | EYE
TETRABUTYL ORTHOTITANATE LT-P1 | SKI | EYE TETRAKIS(2-
BUTOXYETHYL) ORTHOSILICATE LT-UNK LIMESTONE; CALCIUM
CARBONATE BM-3dg OCTAMETHYLTRISILOXANE (L3) LT-P1 | PBT
DECAMETHYLCYCLOPENTASILOXANE (D5) BM-1 | END | PBT | MUL
NAPHTHALENE LT-1 | END | PBT | CAN | MUL | AQU | EYE | MAM |

Number of Greenscreen BM-4/BM3 contents ... 2

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

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This HPD (Health Product Declaration) is made with HPD Standard v2.3, Basic Method/Product Threshold.

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: AgBB evaluation scheme 2015 (building products emissions)

: Environmental Product Declaration (EPD) by IBU (Arbeitsgemeinschaft Umweltverträgliches Bauprodukt E.V.(AUB)

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Third Party Verified?

- ☐ Yes
- ☒ No

PREPARER: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2023-11-13
PUBLISHED DATE: 2023-11-20
EXPIRY DATE: 2026-11-13

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

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

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.3, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-3-standard

TEXLON SYSTEM

PRODUCT THRESHOLD: Per GHS SDS

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Partially

RESIDUALS AND IMPURITIES NOTES: No Residuals or Impurities are expected to be present at or above the Content Inventory Threshold that returns a GreenScreen score of BM-1, BM-3, BM-3dg, LT-1, LT-P1, LT-UNK or NoGS.

OTHER PRODUCT NOTES:

ALUMINUM

ID: 7429-90-5

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2023-11-13 5:52:30	
%: 65.7100 - 77.7100 GreenScreen: BM-1 RC: UNK NANO: Unknown SUBSTANCE ROLE: Alloy element				
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1		H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]	
MAM	GHS - Japan		H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]	
PHY	GHS - New Zealand		Flammable solids category 1	
MAM	GHS - Japan		H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]	
PHY	GHS - Japan		H261 - In contact with water releases flammable gas [Substances and mixtures, which in contact with water, emit flammable gases - Category 2]	
PHY	GHS - Malaysia		H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]	
PHY	GHS - Australia		H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]	
PHY	GHS - New Zealand		Pyrophoric solids category 1	

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products

SUBSTANCE NOTES: Aluminium Extrusion for ETFE Cushion Frame.
Proportion of the Aluminium Alloy EN-AW 6060. Mass range due to different system configurations. Pre- and post-consumer recycling rate for aluminium in Europe: 50%. The recycling rate in the building sector is approx. 90%.

POLY(ETHYLENE-TETRAFLUOROETHYLENE)

ID: **Undisclosed**

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2023-11-13 5:52:30	
%: 12.0000 - 24.5000	GreenScreen: NoGS	RC: None	NANO: No	SUBSTANCE ROLE: Polymer species
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance		
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List PFAS		
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Core Restrictions		
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2023 Red List substances to avoid in Living Building Challenge V4.0 projects		

SUBSTANCE NOTES: ETFE Foil.
Information on VOC testing is provided in the NOTES section of this HPD

POLYDIMETHYLSILOXANES (PRIMARY CASRN IS 63148-62-9)

ID: **2161362-23-6**

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2023-11-13 5:52:30	
%: 3.4800 - 9.5400	GreenScreen: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Sealant

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
PBT	EC - CEPA DSL	Persistent, Bioaccumulative and inherently Toxic (PBiTH) to humans
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists
SUBSTANCE NOTES: Silicon Gasket. Proxy for generic polyorganosiloxanes.		

SILICA, AMORPHOUS (PRIMARY CASRN IS 7631-86-9)

ID: 37241-25-1

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2023-11-13 5:52:30

%: 3.4800 - 9.5400 GreenScreen: BM-1 RC: UNK NANO: No SUBSTANCE ROLE: Sealant

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List
		Antimicrobials

SUBSTANCE NOTES: Silicon Gasket.
The Recycled Content is Unknown.

MAGNESIUM

ID: 7439-95-4

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2023-11-13 5:52:30

%: 0.2300 - 0.4700 GreenScreen: LT-UNK RC: UNK NANO: Unknown SUBSTANCE ROLE: Abrasion resistance

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H260 - In contact with water releases flammable gases which may ignite spontaneously [Substances and mixtures which, in contact with water, emit flammable gases - Category 1]
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
PHY	GHS - Australia	H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]
PHY	GHS - New Zealand	Self-heating substances and mixtures category 1
PHY	GHS - New Zealand	Substances and mixtures which, in contact with water, emit flammable gases category 1
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]
PHY	GHS - Australia	H260 - In contact with water releases flammable gases which may ignite spontaneously [Substances and mixtures which, in contact with water, emit flammable gases - Category 1]
EYE	GHS - Japan	H319 - Causes serious eye irritation [Serious eye damage / eye irritation - Category 2A]

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

SUBSTANCE NOTES: Aluminium Extrusion for ETFE Cushion Frame.
Proportion of the Aluminium Alloy EN-AW 6060. Mass range due to different system configurations. Pre- and post-consumer recycling rate for aluminium in Europe: 50%. The recycling rate in the building sector approx. 90%.

SILICON, ELEMENTAL

ID: 7440-21-3

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-11-13 5:52:31**

%: **0.2000 - 0.4700** GreenScreen: **LT-UNK** RC: **UNK** NANO: **Unknown** SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

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

SUBSTANCE NOTES: Aluminium Extrusion for ETFE Cushion Frame.
Proportion of the Aluminium Alloy EN-AW 6060. Mass range due to different system configurations. Pre- and post-consumer recycling rate for aluminium in Europe: 50%. The recycling rate in the building sector approx. 90%.

CALCIUM STEARATE

ID: 1592-23-0

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2023-11-13 5:52:31	
%: 0.3100 - 0.3700	GreenScreen: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Lubricant
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
None found		No listings found on Additional Hazard Lists		
SUBSTANCE NOTES: Polypropylene (Keder) Ropes. The recycled content is unknown.				

IRON, ELEMENTAL

ID: 7439-89-6

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2023-11-13 5:52:31	
%: 0.0700 - 0.2300	GreenScreen: LT-P1	RC: UNK	NANO: Unknown	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION	
None found			No listings found on Additional Hazard Lists	
SUBSTANCE NOTES: Aluminium Extrusion for ETFE Cushion Frame. Proportion of the Aluminium Alloy EN-AW 6060. Mass range due to different system configurations. Pre- and post-consumer recycling rate for aluminium in Europe: 50%. The recycling rate in the building sector approx. 90%.				

ZINC, ELEMENTAL

ID: 7440-66-6

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2023-11-13 5:52:31	
%: 0.0000 - 0.1200	GreenScreen: LT-P1	RC: UNK	NANO: Unknown	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H260 - In contact with water releases flammable gases which may ignite spontaneously [Substances and mixtures which, in contact with water, emit flammable gases - Category 1]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]
PHY	GHS - Australia	H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]
PHY	GHS - New Zealand	Pyrophoric solids category 1
PHY	GHS - New Zealand	Self-heating substances and mixtures category 1
PHY	GHS - New Zealand	Substances and mixtures which, in contact with water, emit flammable gases category 1
PHY	GHS - Australia	H260 - In contact with water releases flammable gases which may ignite spontaneously [Substances and mixtures which, in contact with water, emit flammable gases - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Japan	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Japan	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - Australia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPPI)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPPI)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products

SUBSTANCE NOTES: Aluminium Extrusion for ETFE Cushion Frame.

Proportion of the Aluminium Alloy EN-AW 6060. Mass range due to different system configurations. Pre- and post-consumer recycling rate for aluminium in Europe: 50%. The recycling rate in the building sector appr. 90%.

UNKNOWN

ID: **Unknown**

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: Not Screened	
%: 0.0000 - 0.1000	GreenScreen: Not Screened	RC: UNK	NANO: Unknown	SUBSTANCE ROLE: Sealant
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
	Hazard Screening not performed			
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION	
	Additional Hazard Screening not performed			

SUBSTANCE NOTES: Dow Corning 123 Silicone Seal Custom Designs H.C.

Not disclosed by the supplier.

MANGANESE

ID: **7439-96-5**

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2023-11-13 5:52:31	
?: 0.0000 - 0.0800	GreenScreen: LT-P1	RC: UNK	NANO: Unknown	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
REP	GHS - Japan	H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1B]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 3
AQU	GHS - Japan	H401 - Toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 2]
AQU	GHS - Japan	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022
		Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022
		Children's Products

SUBSTANCE NOTES: Aluminium Extrusion for ETFE Cushion Frame.
Proportion of the Aluminium Alloy EN-AW 6060. Mass range due to different system configurations. Pre- and post-consumer recycling rate for aluminium in Europe: 50%. The recycling rate in the building sector is approx. 90%.

COPPER

ID: 7440-50-8

HAZARD DATA SOURCE:	Pharos Chemical and Materials Library	HAZARD SCREENING DATE:	2023-11-13 5:52:31
%: 0.0000 - 0.0800	GreenScreen: LT-P1	RC: UNK	NANO: Unknown SUBSTANCE ROLE: Alloy element

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
GEN	GHS - New Zealand	Germ cell mutagenicity category 1
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
EYE	GHS - New Zealand	Eye irritation category 2
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
SKI	GHS - New Zealand	Skin sensitisation category 1
MAM	GHS - New Zealand	Acute inhalation toxicity category 2
MAM	GHS - New Zealand	Acute oral toxicity category 2
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 2
AQU	GHS - Australia	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products

SUBSTANCE NOTES: Aluminium Extrusion for ETFE Cushion Frame.

Proportion of the Aluminium Alloy EN-AW 6060. Mass range due to different system configurations. Pre- and post-consumer recycling rate for aluminium in Europe: 50%. The recycling rate in the building sector is approx. 90%.

%: 0.0000 - 0.0400

GreenScreen: LT-P1

RC: UNK

NANO: Unknown

SUBSTANCE ROLE: Alloy element

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
REP	GHS - New Zealand	Reproductive toxicity category 2
RES	GHS - Japan	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled [Respiratory sensitization - Category 1A]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022
		Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022
		Children's Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022
		Cosmetics & Personal Care Products

SUBSTANCE NOTES: Aluminium Extrusion for ETFE Cushion Frame.
Proportion of the Aluminium Alloy EN-AW 6060. Mass range due to different system configurations. Pre- and post-consumer recycling rate for aluminium in Europe: 50%. The recycling rate in the building sector is approx. 90%.

CARBON BLACK

ID: 1333-86-4

%: 0.0100

GreenScreen: BM-1

RC: UNK

NANO: Unknown

SUBSTANCE ROLE: Sealant

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 2b - Possibly carcinogenic to humans
EYE	GHS - New Zealand	Eye irritation category 2
CAN	GHS - New Zealand	Carcinogenicity category 2
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
PHY	GHS - Japan	H251 - Self-heating;; may catch fire [Self-heating substances and mixtures - Category 1]

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

SUBSTANCE NOTES: Dow Corning 795 Silicone Building Sealant for patches.
Proportional mass content on Dow Corning 795 SGS - Black: 3,5 mg/m³.

CALCIUM CARBONATE

ID: 471-34-1

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-11-13 5:52:32

%: 0.0100

GreenScreen: BM-3

RC: UNK

NANO: Unknown

SUBSTANCE ROLE: Sealant

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
EYE	GHS - New Zealand	Eye irritation category 2

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

SUBSTANCE NOTES: Dow Corning 795 Silicone Building Sealant for patches.
Proportional mass content on Dow Corning 795 SGS - Black: 10 mg/m³.

TETRABUTYL ORTHOTITANATE

ID: 5593-70-4

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-11-13 5:52:32

%: 0.0100

GreenScreen: LT-P1

RC: UNK

NANO: Unknown

SUBSTANCE ROLE: Sealant

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	GHS - New Zealand	Skin irritation category 2
EYE	GHS - New Zealand	Serious eye damage category 1
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Dow Corning 1200 OS Primer for Silicone Seal Patches Custom Designs H.C.
Proportional mass concentration on Dow Corning 1200 OS Primer: = 5 - 10 %.

TETRAKIS(2-BUTOXYETHYL) ORTHOSILICATE

ID: 18765-38-3

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-11-13 5:52:32

%: 0.0100

GreenScreen: LT-UNK

RC: UNK

NANO: Unknown

SUBSTANCE ROLE: Sealant

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Dow Corning 1200 OS Primer for Silicone Seal Patches Custom Designs H.C.
Proportional mass concentration on Dow Corning 1200 OS Primer: 5 - 10 %

LIMESTONE; CALCIUM CARBONATE

ID: 1317-65-3

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-11-13 5:52:32

%: 0.0100

GreenScreen: BM-3dg

RC: UNK

NANO: Unknown

SUBSTANCE ROLE: Sealant

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Dow Corning 795 Silicone Building Sealant for patches.
Proportional mass content on Dow Corning 795 SGS - Black: 15 mg/m³

OCTAMETHYLTRISILOXANE (L3)

ID: 107-51-7

%: 0.0100 GreenScreen: LT-P1 RC: UNK NANO: Unknown SUBSTANCE ROLE: Sealant
HAZARD TYPE LIST NAME AND SOURCE WARNINGS
PBT EC - CEPA DSL Persistent, Bioaccumulative and inherently Toxic (PBiTE) to the Environment (based on aquatic organisms)
ADDITIONAL LISTINGS LIST NAME AND SOURCE NOTIFICATION
None found No listings found on Additional Hazard Lists
SUBSTANCE NOTES: Dow Corning 1200 OS Primer for Silicone Seal Patches Custom Designs H.C Proportional mass concentration on 1200 OS Primer Clear: 70 - 90 %

DECAMETHYLCYCLOPENTASILOXANE (D5)

ID: 541-02-6

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2023-11-13 5:52:33	
%: 0.0000 - 0.0010	GreenScreen: BM-1	RC: UNK	NANO: Unknown	SUBSTANCE ROLE: Impurity/Residual
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
PBT	OR DEQ - Priority Persistent Pollutants		Priority Persistent Pollutant - Tier 1	
PBT	EC - CEPA DSL		Persistent, Bioaccumulative and inherently Toxic (PBiTE) to the Environment (based on aquatic organisms)	
MUL	ChemSec - SIN List		CMR - Carcinogen, Mutagen &/or Reproductive Toxicant	
PBT	ChemSec - SIN List		PBT / vPvB (Persistent, Bioaccumulative, & Toxic / very Persistent & very Bioaccumulative)	
PBT	EU - SVHC List		PBT - Candidate list	
PBT	EU - SVHC List		vPvB - Candidate list	
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION	
RESTRICTED LIST	Green Science Policy Institute (GSPI)		GSPI - Six Classes Precautionary List	
			Some Solvents	
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)		C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022	
			Formulated Consumer Products	
SUBSTANCE NOTES: This substance is a feedstock for Polydimethylsiloxanes.				

NAPHTHALENE

ID: 91-20-3

%: 0.0000 - 0.0010

GreenScreen: LT-1

RC: UNK

NANO: No

SUBSTANCE ROLE: Impurity/Residual

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
END	ChemSec - SIN List	Endocrine Disruption
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CAN	CA EPA - Prop 65	Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	WA DoE - PBT	PBT
PBT	US EPA - Toxics Release Inventory PBTs	PBT
CAN	US EPA - IRIS Carcinogens	(1986) Group C - Possible human Carcinogen
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
EYE	GHS - New Zealand	Eye irritation category 2
CAN	GHS - New Zealand	Carcinogenicity category 2
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
CAN	EU - Annex VI CMRs	Carcinogen Category 2 - Suspected human Carcinogen
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Japan	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]

AQU	GHS - Japan	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - Australia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
CAN	GHS - Malaysia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
AQU	GHS - Malaysia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - Malaysia	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2023 Red List substances to avoid in Living Building Challenge V4.0 projects
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products
SUBSTANCE NOTES: This substance is a feedstock for carbon black.		

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	AgBB evaluation scheme 2015 (building products emissions)	
CERTIFYING PARTY: Third Party	ISSUE DATE: 2023-02-24	CERTIFIER OR LAB: Bremer
APPLICABLE FACILITIES: Manufacturing sites to which testing applies.	EXPIRY DATE:	Umweltinstitut
CERTIFICATE URL:		
CERTIFICATION AND COMPLIANCE NOTES: The ETFE foil was tested for VOC emissions according to ISO 16000-3, 16000-06, and 16000-1. According to the independent laboratory results, emissions after one, three and ten days of storage show very low concentrations of the detected VOCs and SVOCs. Comparing the emission behaviour with the AgBB/DIBt thresholds, the sum concentrations for asked parameters were much lower than required. The ETFE fulfills the AgBB requirements completely. The break-off criteria allowed the test to be completed after 7 days rather than the standard 28 days. Also, the concentration of aldehydes were low. In addition, it can be said that the determined VOCs are harmless to health. Substances that are carcinogenic, mutagenic, or toxic to reproduction were not detected.		

LCA	Environmental Product Declaration (EPD) by IBU (Arbeitsgemeinschaft Umweltverträgliches Bauprodukt E.V.(AUB)	
CERTIFYING PARTY: Third Party	ISSUE DATE: 2021-07-19	CERTIFIER OR LAB: IBU
APPLICABLE FACILITIES: This Environmental Product Declaration is as per EN 15804+A2	EXPIRY DATE: 2026-07-18	
CERTIFICATE URL: https://www.vector-foiltec.com/wp-content/uploads/2023/01/EPD-Environmental-Product-Declaration-AGC-until-14.01.2023-ENGLISH-1-591.pdf		
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.

VARIOUS FASTENERS, AIR SUPPLY SYSTEMS, ETC
MANUFACTURER (OR GENERIC): Generic
HPD URL: No HPD available
ACCESSORY TYPE: Installation Accessory
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Various fasteners, air supply systems, etc
ACCESSORY MATERIALS WILL DEPEND ON SITE INSTALLATION REQUIREMENTS
MANUFACTURER (OR GENERIC): Generic
HPD URL: No HPD Available
ACCESSORY TYPE: Installation Accessory
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Accessory materials will depend on site installation requirements
EGOSILICON 351
MANUFACTURER (OR GENERIC): EGO
HPD URL: https://hpdrepository.hpd-collaborative.org/repository/HPDs/1406_EGOSILICON_351
ACCESSORY TYPE: Other
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: The product is used as a sealant in the installation of the Texlon System, the total quantity is 0.03% of the entire Texlon system.



The ETFE foil was tested for VOC emissions in accordance with the AgBB scheme/AgBB 2015 and completely fulfills the requirement for emissions of WVOC, VOC and SVOC according to testing and evaluation scheme. The Texlon system also possesses the Environmental Product Declaration, a type III Environmental declaration according to ISO 14025 standard.

MANUFACTURER INFORMATION

MANUFACTURER: Vector Foiltec GmbH
ADDRESS: Steinacker 3
 Bremen, Bremen 28717
COUNTRY: Germany
LATITUDE: 53.1725000
LONGITUDE: 8.6849000

WEBSITE: <https://www.vector-foiltec.com/>
CONTACT NAME: Dr. Torsten Balster
TITLE: Head of Research and Development
PHONE: +49 0 421 69351 77
EMAIL: torsten.balster@vector-foiltec.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	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-P1 List Translator Possible 1 (Possible Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-2 Benchmark 2 (use but search for safer substitutes)	LT-UNK List Translator Benchmark Unknown
BM-1 Benchmark 1 (avoid - chemical of high concern)	NoGS No GreenScreen.
BM-U Benchmark Unspecified (due to insufficient data)	

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, www.greenscreenchemicals.org, and Best Practices for Hazard Screening on the HPDC website (hpd-collaborative.org).

Recycled Types

PreC Pre-consumer recycled content
PostC Post-consumer recycled content
UNK Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms:

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

Inventory Methods:

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

Nano Composed of nano scale particles or nanotechnology

Third Party Verified Verification by independent certifier approved by HPDC

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

Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- *a method for the assessment of exposure or risk associated with product handling or use,*
- *a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.*

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

