

HPD UNIQUE IDENTIFIER: 24582

CLASSIFICATION: 07 54 00 Thermoplastic Membrane Roofing

PRODUCT DESCRIPTION: Next-Generation TPO Engineered For Extreme Applications.

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold level	Residuals/Impurities	<i>All Substances Above the Threshold Indicated Are:</i> Characterized <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No % weight and role provided for all substances. Screened <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No All substances screened using Priority Hazard Lists with results disclosed. Identified <input type="radio"/> Yes Ex/SC <input type="radio"/> Yes <input checked="" type="radio"/> 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.
<input checked="" type="radio"/> Nested Materials Method	<input type="radio"/> 100 ppm	Residuals/Impurities	
<input type="radio"/> Basic Method	<input checked="" type="radio"/> 1,000 ppm	Considered in 0 of 2 Materials	
Threshold Disclosed Per	<input type="radio"/> Per GHS SDS	Explanation(s) provided for Residuals/Impurities?	
<input type="radio"/> Material	<input type="radio"/> Other	<input checked="" type="radio"/> Yes <input type="radio"/> No	
<input checked="" type="radio"/> 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.

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

EVERGUARD EXTREME® TPO 50-80 MIL [ETHENE, POLYMER WITH 1-PROPENE LT-UNK MAGNESIUM HYDROXIDE BM-3 POLYETHYLENE TEREPHTHALATE (PET) LT-UNK TITANIUM DIOXIDE LT-1 | CAN | END POLYETHYLENE LT-UNK CALCIUM STEARATE LT-UNK TINUVIN 119 LT-P1 | AQU | MUL | SKI IRGANOX 1010 LT-UNK 1,3-PROPANEDIAMINE, N1,N1'-1,2-ETHANEDIYLBIS-, POLYMER WITH 2,4,6-TRICHLORO-1,3,5-TRIAZINE, REACTION PRODUCTS WITH N-BUTYL-2,2,6,6-TETRAMETHYL-4-PIPERIDINAMINE LT-P1 | MUL AMINES, BIS(HYDROGENATED TALLOW ALKYL), OXIDIZED LT-UNK BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) SEBACATE BM-1 | MUL DOCOSANAMIDE LT-UNK TRIS(2,4-DI-TERT-BUTYLPHENYL) PHOSPHITE LT-UNK | PBT 2-(2H-BENZOTRIAZOL-2-YL)-4,6-DI-TERT-PENTYLPHENOL LT-1 | MUL | PBT] UNDISCLOSED [UNDISCLOSED LT-UNK UNDISCLOSED LT-1 | CAN | END UNDISCLOSED BM-1 UNDISCLOSED LT-UNK UNDISCLOSED LT-UNK | PBT UNDISCLOSED BM-1 | SKI UNDISCLOSED BM-3 UNDISCLOSED LT-P1 | END]

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

Contents highest concern GreenScreen Benchmark or List translator Score ... BM-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This HPD is Identified as "No" because a proprietary substance in this material is not disclosed by name.

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: N/A

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients Option 1

Third Party Verified?	PREPARER: Self-Prepared	SCREENING DATE: 2021-04-23
<input type="radio"/> Yes	VERIFIER:	PUBLISHED DATE: 2021-04-23
<input checked="" type="radio"/> No	VERIFICATION #:	EXPIRY DATE: 2024-04-23

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

EVERGUARD EXTREME® TPO 50-80 MIL %: 99.0000 - 99.9000

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES CONSIDERED: No MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities have not been considered.

OTHER MATERIAL NOTES:

ETHENE, POLYMER WITH 1-PROPENE

ID: 9010-79-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-04-23 6:54:47

%: 50.0000 - 65.0000 GS: LT-UNK RC: None NANO: No SUBSTANCE ROLE: Polymer species

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

MAGNESIUM HYDROXIDE

ID: 1309-42-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-04-23 6:54:47

%: 20.0000 - 35.0000 GS: BM-3 RC: None NANO: No SUBSTANCE ROLE: Flame retardant

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

POLYETHYLENE TEREPHTHALATE (PET)

ID: 25038-59-9

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-04-23 6:54:48

%: 5.0000 - 15.0000 GS: LT-UNK RC: None NANO: No SUBSTANCE ROLE: Abrasion resistance

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

TITANIUM DIOXIDE

ID: 13463-67-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-04-23 6:54:50

#: 1.0000 - 10.0000

GS: LT-1

RC: None

NANO: No

SUBSTANCE ROLE: Pigment

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
CAN	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels

SUBSTANCE NOTES:

POLYETHYLENE

ID: 9002-88-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-04-23 6:54:50

#: 1.0000 - 10.0000

GS: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Polymer species

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

SUBSTANCE NOTES:

CALCIUM STEARATE

ID: 1592-23-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-04-23 6:54:53

#: 0.1000 - 10.0000

GS: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Lubricant

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

SUBSTANCE NOTES:

TINUVIN 119

ID: 106990-43-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-04-23 6:54:54

#: 0.1000 - 10.0000

GS: LT-P1

RC: None

NANO: No

SUBSTANCE ROLE: Heat or UV stabilizer

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
AQU	EU - GHS (H-Statements)	H411 - Toxic to aquatic life with long lasting effects
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
SKI	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction

SUBSTANCE NOTES:

IRGANOX 1010

ID: 6683-19-8

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-04-23 6:54:53**

%: **0.1000 - 10.0000** GS: **LT-UNK** RC: **None** 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:

1,3-PROPANEDIAMINE, N1,N1'-1,2-ETHANEDIYLBIS-, POLYMER WITH 2,4,6-TRICHLORO-1,3,5-TRIAZINE, REACTION PRODUCTS WITH N-BUTYL-2,2,6,6-TETRAMETHYL-4-PIPERIDINAMINE

ID: 136504-96-6

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-04-23 6:54:52**

%: **0.1000 - 10.0000** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Heat or UV stabilizer**

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

SUBSTANCE NOTES:

AMINES, BIS(HYDROGENATED TALLOW ALKYL), OXIDIZED

ID: 143925-92-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-04-23 6:54:54**

%: **0.0100 - 10.0000** GS: **LT-UNK** RC: **None** 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:

BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) SEBACATE

ID: 52829-07-9

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-04-23 6:54:55**

%: **0.0100 - 10.0000** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Heat or UV stabilizer**

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

SUBSTANCE NOTES:

DOCOSANAMIDE

ID: 3061-75-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-04-23 6:54:55**

#: 0.0100 - 10.0000

GS: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Surfactant

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

SUBSTANCE NOTES:

TRIS(2,4-DI-TERT-BUTYLPHENYL) PHOSPHITE

ID: 31570-04-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-04-23 6:54:56

#: 0.0100 - 10.0000

GS: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Antioxidant

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
PBT	EU - ESIS PBT	Under PBT evaluation

SUBSTANCE NOTES:

2-(2H-BENZOTRIAZOL-2-YL)-4,6-DI-TERT-PENTYLPHENOL

ID: 25973-55-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-04-23 6:54:56

#: 0.0100 - 10.0000

GS: LT-1

RC: None

NANO: No

SUBSTANCE ROLE: Heat or UV stabilizer

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Substance of Possible Concern
PBT	ChemSec - SIN List	PBT / vPvB (Persistent, Bioaccumulative, & Toxic / very Persistent & very Bioaccumulative)
PBT	EU - SVHC Authorisation List	PBT - Candidate list
PBT	EU - SVHC Authorisation List	PBT - Prioritized for listing
PBT	EU - SVHC Authorisation List	vPvB - Candidate list
PBT	EU - SVHC Authorisation List	vPvB - Prioritized for listing
PBT	EU - SVHC Authorisation List	PBT - Banned unless Authorised
PBT	EU - SVHC Authorisation List	vPvB - Banned unless Authorised

SUBSTANCE NOTES:

UNDISCLOSED

#: 0.1000 - 1.0000

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES CONSIDERED: No MATERIAL TYPE: Other: Proprietary Pigment

RESIDUALS AND IMPURITIES NOTES: This pigment is a proprietary formula. Residual and impurity information was not available.

OTHER MATERIAL NOTES: This is a proprietary material.

UNDISCLOSED

ID: Undisclosed

%: **65.0000 - 75.0000**GS: **LT-UNK**RC: **None**NANO: **No**SUBSTANCE ROLE: **Pigment**

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

SUBSTANCE NOTES: This is a part of a proprietary material whose information cannot be disclosed.

UNDISCLOSEDID: **Undisclosed**%: **10.0000 - 20.0000**GS: **LT-1**RC: **None**NANO: **No**SUBSTANCE ROLE: **Pigment**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
CAN	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels

SUBSTANCE NOTES: This is a part of a proprietary material whose information cannot be disclosed.

UNDISCLOSEDID: **Undisclosed**%: **1.0000 - 5.0000**GS: **BM-1**RC: **None**NANO: **No**SUBSTANCE ROLE: **Pigment**

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

SUBSTANCE NOTES: This is a part of a proprietary material whose information cannot be disclosed.

UNDISCLOSEDID: **Undisclosed**%: **1.0000 - 5.0000**GS: **LT-UNK**RC: **None**NANO: **No**SUBSTANCE ROLE: **Pigment**

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

SUBSTANCE NOTES: This is a part of a proprietary material whose information cannot be disclosed.

UNDISCLOSEDID: **Undisclosed**HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-04-23 6:54:49**%: **1.0000 - 5.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

HAZARD TYPE AGENCY AND LIST TITLES WARNINGS

PBT EU - ESIS PBT Under PBT evaluation

SUBSTANCE NOTES: This is a part of a proprietary material whose information cannot be disclosed.

UNDISCLOSEDID: **Undisclosed**HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-04-23 6:54:52**%: **0.1000 - 1.0000** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

HAZARD TYPE AGENCY AND LIST TITLES WARNINGS

SKI MAK Sensitizing Substance Sh - Danger of skin sensitization

SUBSTANCE NOTES: This is a part of a proprietary material whose information cannot be disclosed.

UNDISCLOSEDID: **Undisclosed**HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-04-23 6:54:51**%: **0.1000 - 1.0000** GS: **BM-3** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

HAZARD TYPE AGENCY AND LIST TITLES WARNINGS

None found No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: This is a part of a proprietary material whose information cannot be disclosed.

UNDISCLOSEDID: **Undisclosed**HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-04-23 6:54:51**%: **0.1000 - 1.0000** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

HAZARD TYPE AGENCY AND LIST TITLES WARNINGS

END TEDX - Potential Endocrine Disruptors Potential Endocrine Disruptor

SUBSTANCE NOTES: This is a part of a proprietary material whose information cannot be disclosed.

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	N/A		
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2021-03-26	EXPIRY DATE:	CERTIFIER OR LAB: N/A
APPLICABLE FACILITIES: N/A			
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

MANUFACTURER INFORMATION

MANUFACTURER: GAF
ADDRESS: 1 Campus Drive
 Parsippany NJ 07054, USA
WEBSITE: www.gaf.com

CONTACT NAME: Bonnie Sharphouse
TITLE: Sustainability Manager
PHONE: 9736283000
EMAIL: bonnie.sharphouse@gaf.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-1 List Translator 1 (Likely Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-UNK List Translator Benchmark Unknown (the chemical is present on at least one GreenScreen Specified List, but the information contained within the list did not result in a clear mapping to a LT-1 or LTP1 score.)
BM-2 Benchmark 2 (use but search for safer substitutes)	NoGS No GreenScreen.
BM-1 Benchmark 1 (avoid - chemical of high concern)	
BM-U Benchmark Unspecified (due to insufficient data)	
LT-P1 List Translator Possible 1 (Possible Benchmark-1)	

Recycled Types

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

Other Terms:

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

Inventory Methods:

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

Nano Composed of nano scale particles or nanotechnology
Third Party Verified Verification by independent certifier approved by HPDC
Preparer Third party preparer, if not self-prepared by manufacturer
Applicable facilities Manufacturing sites to which testing applies

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

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

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

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

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.