

Section 1: Summary

CONTENT INVENTORY

- Threshold per material
- 100 ppm
 - 1,000 ppm
 - Per GHS SDS
 - Per OSHA MSDS
 - Other

Residuals and impurities considered in 1 of 1 materials

- see Section 2: Material Notes
- see Section 5: General Notes

Based on the selected Content Inventory Threshold:

| | | |
|---|----------------------------------|-----------------------|
| Characterized..... | <input checked="" type="radio"/> | <input type="radio"/> |
| Are the Percent Weight and Role provided for all substances? | Yes | No |
| Screened..... | <input checked="" type="radio"/> | <input type="radio"/> |
| Are all substances screened using Priority Hazard Lists with results disclosed? | Yes | No |
| Identified..... | <input checked="" type="radio"/> | <input type="radio"/> |
| Are all substances disclosed by Name (Specific or Generic) and Identifier? | Yes | No |

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® TPO LOW VOC BONDING ADHESIVE | METHYL ACETATE **LT-P1** | EYE | PHY
 PARACHLOROBENZOTRIFLUORIDE (PCBTF) **LT-P1** | MUL N-HEXANE **LT-P1** | MAM | SKI | AQU | REP
 | MUL | END | PHY TOLUENE **BM-1** | MAM | SKI | DEV | REP | END | MUL | PHY CYCLOHEXANE **LT-P1**
 | SKI | AQU | MAM | MUL | PHY N-HEPTANE **LT-P1** | SKI | AQU | MAM | END | MUL | PHY SOLVENT
 NAPHTHA (PETROLEUM), LIGHT ALIPHATIC **LT-1** | CAN | GEN | MAM | MUL METHANOL **LT-1** | MAM |
 DEV | PHY | END | 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:

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE

No certifications have been added to this HPD.

| | | | |
|--|-----------------|--------------------------------|--|
| <input checked="" type="radio"/> Self-Published* | VERIFIER: | SCREENING DATE: April 14, 2017 | EXPIRY DATE*: April 14, 2020 |
| <input type="radio"/> Third Party Verified | VERIFICATION #: | RELEASE DATE: April 14, 2017 | * or within 3 months of significant change in product contents |

*See HPDC website for details



Section 2: Content in Descending Order of Quantity

This section lists materials in a product and the substances in each material based on the Inventory Threshold for each material. If residuals or impurities from the manufacturing or extraction processes are considered for a material, these are inventoried and characterized to the extent described in the Material and/or General Notes. Chemical substances are screened against the HPD Priority Hazard Lists for human and environmental health impacts. Screening is based on best available information; "Not Found" does not necessarily mean there is no potential hazard associated with the product or its contents. More information about Priority Hazard Lists and the GreenScreen can be found online: www.hpd-collaborative.org and www.greenscreenchemicals.org.

EVERGUARD® TPO LOW VOC BONDING ADHESIVE %: 100.0000 - 100.0000 HPD URL:

Inventory Threshold: 1000 ppm

Residuals Considered: Yes

Material Notes: EverGuard® TPO Low VOC Bonding Adhesive

METHYL ACETATE

ID: 79-20-9

%: 25.0000 - 50.0000

GS: LT-P1

RC: None

NANO: NO

ROLE: Solvent/Cleaner

HAZARDS:

AGENCY(IES) WITH WARNINGS:

EYE IRRITATION

EU - R-phrases

R36 - Irritating to eyes

EYE IRRITATION

EU - GHS (H-Statements)

H319 - Causes serious eye irritation

PHYSICAL HAZARD
(REACTIVE)

EU - GHS (H-Statements)

H225 - Highly flammable liquid and vapour

SUBSTANCE NOTES: Solvent

PARACHLOROBENZOTRIFLUORIDE (PCBTF)

ID: 98-56-6

%: 10.0000 - 30.0000

GS: LT-P1

RC: None

NANO: NO

ROLE: Solvent/Cleaner

HAZARDS:

AGENCY(IES) WITH WARNINGS:

MULTIPLE

German FEA - Substances Hazardous to Waters

Class 2 - Hazard to Waters

SUBSTANCE NOTES: Solvent/Cleaner

N-HEXANE

ID: 110-54-3

%: 3.0000 - 10.0000

GS: LT-P1

RC: None

NANO: NO

ROLE: Solvent/Cleaner

HAZARDS:

AGENCY(IES) WITH WARNINGS:

MAMMALIAN

EU - R-phrases

R20 - Harmful by Inhalation (gas or vapor or dust/mist)

SKIN IRRITATION

EU - R-phrases

R38 - Irritating to skin

ORGAN TOXICANT

EU - R-phrases

R48: Danger of serious damage to health by prolonged exposure.

| | | |
|----------------------------|---|--|
| ACUTE AQUATIC | EU - R-phrases | R51 - Toxic to Aquatic Organisms |
| REPRODUCTIVE | EU - R-phrases | R62 - Possible risk of impaired fertility |
| CHRON AQUATIC | EU - GHS (H-Statements) | H411 - Toxic to aquatic life with long lasting effects |
| MAMMALIAN | EU - GHS (H-Statements) | H304 - May be fatal if swallowed and enters airways |
| SKIN IRRITATION | EU - GHS (H-Statements) | H315 - Causes skin irritation |
| REPRODUCTIVE | EU - GHS (H-Statements) | H361f - Suspected of damaging fertility |
| MULTIPLE | ChemSec - SIN List | CMR - Carcinogen, Mutagen &/or Reproductive Toxicant |
| ENDOCRINE | ChemSec - SIN List | Endocrine Disruption |
| ENDOCRINE | TEDX - Potential Endocrine Disruptors | Potential Endocrine Disruptor |
| MULTIPLE | German FEA - Substances Hazardous to Waters | Class 2 - Hazard to Waters |
| PHYSICAL HAZARD (REACTIVE) | EU - GHS (H-Statements) | H225 - Highly flammable liquid and vapour |

SUBSTANCE NOTES: Solvent/Cleaner

TOLUENE

ID: 108-88-3

%: 1.0000 - 5.0000 GS: BM-1 RC: None NANO: NO ROLE: Solvent/Cleaner

HAZARDS:

AGENCY(IES) WITH WARNINGS:

| | | |
|-----------------|---------------------------------------|--|
| MAMMALIAN | EU - R-phrases | R20 - Harmful by Inhalation (gas or vapor or dust/mist) |
| SKIN IRRITATION | EU - R-phrases | R38 - Irritating to skin |
| ORGAN TOXICANT | EU - R-phrases | R48: Danger of serious damage to health by prolonged exposure. |
| DEVELOPMENTAL | EU - R-phrases | R63 - Possible risk of harm to the unborn child |
| DEVELOPMENTAL | G&L - Neurotoxic Chemicals | Developmental Neurotoxicant |
| DEVELOPMENTAL | CA EPA - Prop 65 | Developmental toxicity |
| REPRODUCTIVE | CA EPA - Prop 65 | Reproductive Toxicity - Female |
| MAMMALIAN | EU - GHS (H-Statements) | H304 - May be fatal if swallowed and enters airways |
| SKIN IRRITATION | EU - GHS (H-Statements) | H315 - Causes skin irritation |
| DEVELOPMENTAL | EU - GHS (H-Statements) | H361d - Suspected of damaging the unborn child |
| ENDOCRINE | TEDX - Potential Endocrine Disruptors | Potential Endocrine Disruptor |

| | | |
|----------------------------------|---|---|
| MULTIPLE | German FEA - Substances Hazardous to Waters | Class 2 - Hazard to Waters |
| PHYSICAL HAZARD (REACTIVE) | EU - GHS (H-Statements) | H225 - Highly flammable liquid and vapour |
| SUBSTANCE NOTES: Solvent/Cleaner | | |

CYCLOHEXANE

ID: 110-82-7

| | | | | |
|--------------------|-----------|----------|----------|-----------------------|
| %: 1.0000 - 5.0000 | GS: LT-P1 | RC: None | NANO: NO | ROLE: Solvent/Cleaner |
|--------------------|-----------|----------|----------|-----------------------|

| HAZARDS: | | AGENCY(IES) WITH WARNINGS: |
|----------------------------------|---|---|
| SKIN IRRITATION | EU - R-phrases | R38 - Irritating to skin |
| ACUTE AQUATIC | EU - R-phrases | R50 - Very Toxic to Aquatic Organisms |
| 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) | H304 - May be fatal if swallowed and enters airways |
| SKIN IRRITATION | EU - GHS (H-Statements) | H315 - Causes skin irritation |
| MULTIPLE | German FEA - Substances Hazardous to Waters | Class 2 - Hazard to Waters |
| PHYSICAL HAZARD (REACTIVE) | EU - GHS (H-Statements) | H225 - Highly flammable liquid and vapour |
| SUBSTANCE NOTES: Solvent/Cleaner | | |

N-HEPTANE

ID: 142-82-5

| | | | | |
|--------------------|-----------|----------|----------|-----------------------|
| %: 1.0000 - 5.0000 | GS: LT-P1 | RC: None | NANO: NO | ROLE: Solvent/Cleaner |
|--------------------|-----------|----------|----------|-----------------------|

| HAZARDS: | | AGENCY(IES) WITH WARNINGS: |
|-----------------|---------------------------------------|---|
| SKIN IRRITATION | EU - R-phrases | R38 - Irritating to skin |
| ACUTE AQUATIC | EU - R-phrases | R50 - Very Toxic to Aquatic Organisms |
| 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) | H304 - May be fatal if swallowed and enters airways |
| SKIN IRRITATION | EU - GHS (H-Statements) | H315 - Causes skin irritation |
| ENDOCRINE | TEDX - Potential Endocrine Disruptors | Potential Endocrine Disruptor |

| | | |
|----------------------------------|---|---|
| MULTIPLE | German FEA - Substances Hazardous to Waters | Class 2 - Hazard to Waters |
| PHYSICAL HAZARD (REACTIVE) | EU - GHS (H-Statements) | H225 - Highly flammable liquid and vapour |
| SUBSTANCE NOTES: Solvent/Cleaner | | |

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC

ID: 64742-89-8

| | | | | |
|--------------------|----------|----------|----------|-------------------|
| %: 1.0000 - 5.0000 | GS: LT-1 | RC: None | NANO: NO | ROLE: Miscibility |
|--------------------|----------|----------|----------|-------------------|

| HAZARDS: | AGENCY(IES) WITH WARNINGS: | |
|---------------|----------------------------|--|
| CANCER | EU - R-phrases | R45 - May cause cancer |
| GENE MUTATION | EU - R-phrases | R46 - May cause heritable genetic damage |
| MAMMALIAN | EU - GHS (H-Statements) | H304 - May be fatal if swallowed and enters airways |
| GENE MUTATION | EU - GHS (H-Statements) | H340 - May cause genetic defects |
| 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 |
| GENE MUTATION | EU - REACH Annex XVII CMRs | Mutagen Category 2 - Substances which should be regarded as if they are Mutagenic to man |
| MULTIPLE | ChemSec - SIN List | CMR - Carcinogen, Mutagen &/or Reproductive Toxicant |
| CANCER | EU - Annex VI CMRs | Carcinogen Category 1B - Presumed Carcinogen based on animal evidence |
| GENE MUTATION | EU - Annex VI CMRs | Mutagen - Category 1B |

SUBSTANCE NOTES: Low VOC Bonding Adhesive/Miscibility

METHANOL

ID: 67-56-1

| | | | | |
|--------------------|----------|----------|----------|-----------------------|
| %: 0.4000 - 0.6000 | GS: LT-1 | RC: None | NANO: NO | ROLE: Solvent/Cleaner |
|--------------------|----------|----------|----------|-----------------------|

| HAZARDS: | AGENCY(IES) WITH WARNINGS: | |
|----------------|----------------------------|--|
| MAMMALIAN | EU - R-phrases | R23 - Toxic by Inhalation (gas, vapour, dust/mist) |
| MAMMALIAN | EU - R-phrases | R24 - Toxic in Contact with Skin |
| MAMMALIAN | EU - R-phrases | R25 - Toxic if Swallowed |
| ORGAN TOXICANT | EU - R-phrases | R39 - Danger of very serious irreversible effects |

| | | |
|----------------------------------|--|--|
| DEVELOPMENTAL | CA EPA - Prop 65 | Developmental toxicity |
| DEVELOPMENTAL | US NIH - Reproductive & Developmental Monographs | Clear Evidence of Adverse Effects - Developmental Toxicity |
| PHYSICAL HAZARD (REACTIVE) | EU - GHS (H-Statements) | H225 - Highly flammable liquid and vapour |
| MAMMALIAN | EU - GHS (H-Statements) | H301 - Toxic if swallowed |
| MAMMALIAN | EU - GHS (H-Statements) | H311 - Toxic in contact with skin |
| MAMMALIAN | EU - GHS (H-Statements) | H331 - Toxic if inhaled |
| ORGAN TOXICANT | EU - GHS (H-Statements) | H370 - Causes damage to organs |
| ENDOCRINE | TEDX - Potential Endocrine Disruptors | Potential Endocrine Disruptor |
| MULTIPLE | German FEA - Substances Hazardous to Waters | Class 2 - Hazard to Waters |
| SUBSTANCE NOTES: Solvent/Cleaner | | |

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.

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.

Section 5: General Notes



MANUFACTURER INFORMATION

MANUFACTURER: GAF
 ADDRESS: 1 Campus Dr
 Parsippany, NJ 07054
 United States
 WEBSITE: www.gaf.com

CONTACT NAME: Martin Grohman
 TITLE: Sustainability
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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) BM-2 Benchmark 2 (use but search for safer substitutes) | LT-1 List Translator Likely Benchmark 1 |
| BM-1 Benchmark 1 (avoid - chemical of high concern) | LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark) |
| BM-U Benchmark Unspecified (insufficient data to benchmark) | UNK Unknown (no data on List Translator Lists) |

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

Nano Composed of nanoscale particles or nanotechnology

Declaration Level

Self-declared Manufacturer's self-declaration (First Party)
Independent Lab Manufacturer's self-declaration using results from an independent lab
Second Party Verification by trade association or other interested party
Third Party Verification by independent certifier
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 does not provide an assessment of health impacts throughout the product life cycle. It does not provide an assessment of exposure or risk associated with product handling or use. It also does not address potential health impacts of: (i) substances used or created during the manufacturing process unless they remain in the final product, or (ii) substances created after the product is delivered for end use (e.g., if the product burns, degrades, or otherwise changes chemical composition).

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

A disclosure completed in compliance with the HPD Open Standard is referred to as a "Health Product Declaration," or "HPD." 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 Open Standard noted.