

HPD UNIQUE IDENTIFIER: 24471

CLASSIFICATION: 06 05 23 Wood, Plastic, and Composite Fastenings

PRODUCT DESCRIPTION: TPO/EPDM Low VOC Membrane Adhesive (Non-1168)

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
- 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

LVOC MEMBRANE ADHESIVE (TPO & EPDM) [TERT-BUTYL ACETATE LT-UNK | PHY ACETONE LT-P1 | END | DEV | EYE | PHY UNDISCLOSED CHEMICAL LT-UNK TOLUENE BM-1 | END | SKI | DEV | MUL | MAM | REP | PHY P-TERT-BUTYLPHENOLFORMALDEHYDE RESIN LT-UNK DISTILLATES (PETROLEUM), STEAM-CRACKED, POLYMERS WITH LIGHT STEAM-CRACKED PETROLEUM NAPHTHA LT-P1 MAGNESIUM OXIDE LT-UNK | CAN UNDISCLOSED CHEMICAL LT-P1 | SKI 1-PROPENE, HOMOPOLYMER, CHLORINATED LT-UNK IRGANOX 1010 LT-UNK ZINC OXIDE BM-1 | AQU | END | RES | MUL UNDISCLOSED CHEMICAL BM-4 UNDISCLOSED CHEMICAL BM-1 | CAN XYLENES BM-1 | END | SKI | MUL | REP TERT-BUTYL ALCOHOL LT-UNK | EYE | PHY 2,4,4-TRIMETHYL-1-PENTENE LT-P1 | AQU | MUL | PHY]

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:

Alpha Systems worked with an HPDC Approved Preparer to confirm that all intentionally added ingredients, residuals and impurities were considered under the preparation of this HPD. This was accomplished by obtaining full formulation disclosure, including residuals and impurities, down to the 1,000 ppm threshold.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

Material (g/l): 58 Regulatory (g/l): 228
Does the product contain exempt VOCs: No
Are ultra-low VOC tints available: N/A

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

VOC emissions: No Certifications
VOC content: No Certifications

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Third Party Verified?

- Yes
- No

PREPARER: ToxServices LLC

VERIFIER:
VERIFICATION #:

SCREENING DATE: 2021-03-12

PUBLISHED DATE: 2021-04-19

EXPIRY DATE: 2024-03-12

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

LVOC MEMBRANE ADHESIVE (TPO & EPDM)

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Alpha Systems worked with an HPDC Approved Preparer to confirm that all residuals and impurities were considered under the preparation of this HPD. This was accomplished by obtaining full formulation disclosure, including residuals and impurities, down to the 1,000 ppm threshold.

OTHER PRODUCT NOTES:

TERT-BUTYL ACETATE

ID: 540-88-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-03-26 12:47:53

#: 54.8400 - 55.1200 GS: LT-UNK RC: None NANO: No SUBSTANCE ROLE: Solvent

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
PHY	EU - GHS (H-Statements)	H225 - Highly flammable liquid and vapour

SUBSTANCE NOTES:

ACETONE

ID: 67-64-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-03-26 13:03:28

#: 14.5100 - 14.5100 GS: LT-P1 RC: None NANO: No SUBSTANCE ROLE: Solvent

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
DEV	MAK	Pregnancy Risk Group B
EYE	EU - GHS (H-Statements)	H319 - Causes serious eye irritation
PHY	EU - GHS (H-Statements)	H225 - Highly flammable liquid and vapour

SUBSTANCE NOTES:

UNDISCLOSED CHEMICAL

ID: Undisclosed

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-03-26 13:04:52

#: 13.6600 - 13.6600 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: The HPDC Approved Preparer obtained full disclosure down to the 1,000 ppm threshold for the trade name ingredient containing this chemical. Due to the proprietary nature of the information, the name and CAS number for this chemical have been redacted from this substance. #1

TOLUENE

ID: 108-88-3

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-03-26 12:50:29**

#: **5.9400 - 6.0000** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Solvent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKI	EU - GHS (H-Statements)	H315 - Causes skin irritation
DEV	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant
DEV	CA EPA - Prop 65	Developmental toxicity
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
DEV	EU - GHS (H-Statements)	H361d - Suspected of damaging the unborn child
MAM	EU - GHS (H-Statements)	H304 - May be fatal if swallowed and enters airways
REP	CA EPA - Prop 65	Reproductive Toxicity - Female
REP	GHS - Japan	Toxic to reproduction - Category 1A [H360]
PHY	EU - GHS (H-Statements)	H225 - Highly flammable liquid and vapour

SUBSTANCE NOTES: The GreenScreen® Benchmark assessment score of BM-1 was provided through the HPD 2.2 Builder Tool.

P-TERT-BUTYLPHENOLFORMALDEHYDE RESIN

ID: 25085-50-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-03-26 12:57:46**

#: **4.9200 - 5.1800** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Adhesive**

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

SUBSTANCE NOTES:

DISTILLATES (PETROLEUM), STEAM-CRACKED, POLYMERS WITH LIGHT STEAM-CRACKED PETROLEUM NAPHTHA

ID: 68410-16-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-03-26 12:57:18**

#: **2.5300 - 2.5300** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Adhesive**

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

SUBSTANCE NOTES:

MAGNESIUM OXIDE

ID: 1309-48-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: 2021-03-26 12:59:54%: 0.7600 - 0.7600 GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Curing agent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels

SUBSTANCE NOTES:

UNDISCLOSED CHEMICALID: **Undisclosed**HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: 2021-03-26 13:05:56%: 0.6200 - 0.6200 GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Polymer species**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
SKI	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction

SUBSTANCE NOTES: The HPDC Approved Preparer obtained full disclosure down to the 1,000 ppm threshold for the trade name ingredient containing this chemical. Due to the proprietary nature of the information, the name and CAS number for this chemical have been redacted from this substance.#2

1-PROPENE, HOMOPOLYMER, CHLORINATED

ID: 68442-33-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: 2021-03-26 13:00:33%: 0.4600 - 0.4600 GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Adhesive**

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

SUBSTANCE NOTES:

IRGANOX 1010

ID: 6683-19-8

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: 2021-03-26 12:58:59%: 0.3000 - 0.3000 GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Antioxidant**

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

SUBSTANCE NOTES:

ZINC OXIDE

ID: 1314-13-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: 2021-03-26 12:59:27%: 0.2800 - 0.2800 GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Curing agent**

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

SUBSTANCE NOTES: The GreenScreen® Benchmark assessment score of BM-1 was provided through the HPD 2.2 Builder Tool.

UNDISCLOSED CHEMICAL

ID: **Undisclosed**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-03-30 5:52:58**

#: **0.2500 - 0.2500** GS: **BM-4** RC: **None** NANO: **No** SUBSTANCE ROLE: **Solvent**

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

SUBSTANCE NOTES: The HPDC Approved Preparer obtained full disclosure down to the 1,000 ppm threshold for the trade name ingredient containing this chemical. Due to the proprietary nature of the information, the name and CAS number for this chemical have been redacted from this substance. The GreenScreen® Benchmark assessment score of BM-4 was provided through the HPD 2.2 Builder Tool.
#3

UNDISCLOSED CHEMICAL

ID: **Undisclosed**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-03-30 5:55:04**

#: **0.1500 - 0.1500** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Polymer species**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification
CAN	IARC	Group 2b - Possibly carcinogenic to humans

SUBSTANCE NOTES: The HPDC Approved Preparer obtained full disclosure down to the 1,000 ppm threshold for the trade name ingredient containing this chemical. Due to the proprietary nature of the information, the name and CAS number for this chemical have been redacted from this substance. The GreenScreen® Benchmark assessment score of BM-1 was provided through the HPD 2.2 Builder Tool.
#4

XYLENES

ID: **1330-20-7**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-03-26 12:58:12**

#: **0.0500 - 0.2600** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Adhesive**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKI	EU - GHS (H-Statements)	H315 - Causes skin irritation
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
REP	GHS - Japan	Toxic to reproduction - Category 1B [H360]

SUBSTANCE NOTES: The GreenScreen® Benchmark assessment score of BM-1 was provided through the HPD 2.2 Builder Tool.

TERT-BUTYL ALCOHOL

ID: 75-65-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-03-26 12:48:33**

#: **0.0000 - 0.2800** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Solvent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
EYE	EU - GHS (H-Statements)	H319 - Causes serious eye irritation
PHY	EU - GHS (H-Statements)	H225 - Highly flammable liquid and vapour

SUBSTANCE NOTES:

2,4,4-TRIMETHYL-1-PENTENE

ID: 107-39-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-03-26 12:48:57**

#: **0.0000 - 0.2800** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Solvent**

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
PHY	EU - GHS (H-Statements)	H225 - Highly flammable liquid and vapour

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	No Certifications		
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2021-03-	EXPIRY DATE:	CERTIFIER OR LAB: N/A
APPLICABLE FACILITIES: N/A	26		
CERTIFICATE URL:			
CERTIFICATION AND COMPLIANCE NOTES:			

VOC CONTENT	No Certifications		
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2021-03-	EXPIRY DATE:	CERTIFIER OR LAB: N/A
APPLICABLE FACILITIES: N/A	26		
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

Alpha Systems worked with an HPDC Approved Preparer to confirm that all intentionally added ingredients, residuals and impurities were considered under the preparation of this HPD. This was accomplished by obtaining full formulation disclosure, including residuals and impurities, down to the 1,000 ppm threshold.

MANUFACTURER INFORMATION

MANUFACTURER: Alpha Systems LLC
ADDRESS: 5120 Beck Dr.
 Elkhart IN 46516, USA
WEBSITE: <https://alphallc.us/>

CONTACT NAME: Kyle Look
TITLE: Lab Director
PHONE: 574-295-5206
EMAIL: klook@alphallc.us

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)	
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)	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.