

HPD UNIQUE IDENTIFIER: 27098

CLASSIFICATION: 07 21 00 Thermal Insulation

PRODUCT DESCRIPTION: Heatlok® HFO Pro is a two component, closed cell, spray applied, rigid polyurethane foam system. This product uses recycled plastic materials, rapidly renewable soy oils, and the blowing agent has zero ozone depleting potential. Heatlok HFO Pro complies with the intent of the International Code Council’s residential and commercial building codes and is commonly used as a thermal insulation, air barrier, vapor retarder and water resistive barrier in above grade, below grade, interior and exterior applications.

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Table with 4 columns: Inventory Reporting Format, Threshold Level, Residuals/Impurities, and All Substances Above the Threshold Indicated Are: Characterized, Screened, Identified. Includes radio button options for reporting methods and screening results.

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
UNDISCLOSED [POLYMETHYLENE POLYPHENYL ISOCYANATE (DIPHENYLMETHANEDIISOCYANATE) LT-UNK | MUL | RES | CAN 4,4'-DIPHENYLMETHANE DIISOCYANATE (4,4'-DIPHENYLMETHANE DIISOCYANATE (4,4'-METHYLENEDIPHENYL DIISOCYANATE)) LT-UNK | MUL | RES | CAN | SKI | EYE] POLYURETHANE RESIN B-SIDE [TRI-(2-CHLOROISOPROPYL)PHOSPHATE (TRI-(2-CHLOROISOPROPYL)PHOSPHATE (TRIS (2-CHLORO-1-METHYLETHYL) PHOSPHATE)) BM-U | END | MUL | PBT TRIETHYL PHOSPHATE LT-UNK ETHYLENE GLYCOL (ETHYLENE GLYCOL (ETHANEDIOL)) BM-1 | END | DEV DIETHYLENE GLYCOL (DIETHYLENE GLYCOL (2,2 -OXIBISETHANOL)) LT-P1 | END 1,1,3,3-TETRAMETHYLGUANIDINE LT-UNK DIBUTYLTIN BIS(LAURYL MERCAPTIDE) (DIBUTYLTIN BIS(LAURYL MERCAPTIDE) (DIBUTYLBIS(DODECYLTHIO)STANNANE)) LT-P1 | DEV | MUL | CAN]

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:

No Special Conditions applied.

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: UL/GreenGuard Gold Certified
LCA: Environmental Product Declaration (EPD) by UL - Product-Specific, Type III

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Third Party Verified? [] Yes
PREPARER: Self-Prepared
VERIFIER:
SCREENING DATE: 2022-01-17
PUBLISHED DATE: 2022-01-17

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

UNDISCLOSED

#: 50.0000 - 50.0000

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: No residuals or Impurities in the material.

OTHER MATERIAL NOTES: The material, marked as UNDISCLOSED, is part A (A-100) of the spray foam insulation product. The material name is withheld for confidentiality purposes.

GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2B

Respiratory sensitisation : Category 1

Skin sensitisation : Category 1

Specific target organ toxicity

- single exposure

: Category 3 (Respiratory system)

Hazard statements :

H315 + H320 Causes skin and eye irritation.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

Precautionary statements : Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves.

P285 In case of inadequate ventilation wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P362 Take off contaminated clothing and wash before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal:

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

**POLYMETHYLENE POLYPHENYL ISOCYANATE
(DIPHENYLMETHANEDIISOCYANATE)**

ID: 9016-87-9

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-01-17 13:37:33**

#: **50.0000 - 70.0000**

GS: **LT-UNK**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Intermediate**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	US EPA - PPT Chemical Action Plans	EPA Chemical of Concern - Action Plan published
RES	AOEC - Asthmagens	Asthmagen (G) - generally accepted
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
RES	US EPA - PPT Chemical Action Plans	Inhalation sensitizer causing asthma and lung damage

SUBSTANCE NOTES: P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

4,4'-DIPHENYLMETHANE DIISOCYANATE (4,4'-DIPHENYLMETHANE DIISOCYANATE (4,4'-METHYLENEDIPHENYL DIISOCYANATE))

ID: 101-68-8

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-01-17 13:38:43**

#: **30.0000 - 50.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Polymer species**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	US EPA - PPT Chemical Action Plans	EPA Chemical of Concern - Action Plan published
RES	AOEC - Asthmagens	Asthmagen (G) - generally accepted
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
RES	US EPA - PPT Chemical Action Plans	Inhalation sensitizer causing asthma and lung damage
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H317 - May cause an allergic skin reaction [Skin sensitization - Category 1]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
RES	EU - GHS (H-Statements) Annex 6 Table 3-1	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled [Respiratory sensitization - Category 1]
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

SUBSTANCE NOTES: Hazard statements :
 H315 + H320 Causes skin and eye irritation.
 H317 May cause an allergic skin reaction.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation.

POLYURETHANE RESIN B-SIDE %: 50.0000 - 50.0000

Precautionary Statements: **Prevention**
 P280 Wear protective gloves. **RESIDUALS AND IMPURITIES CONSIDERED: Yes** **MATERIAL TYPE: Polymeric Material**

RESIDUALS AND IMPURITIES NOTES: Known Residual: Ethanediol CAS #: 107-21-1 Percentage by weight: ≥1 - <3 Source: pharosproject.net
 Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
 This material is classified hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 + P313 If skin irritation or rash occurs: Get medical advice/attention.
H360 – May damage fertility or the unborn child.
H373 – May cause damage through repeated exposure if swallowed.

Prevention:
 P201 – Obtain special instructions before use.
 P202 – Do not handle until all safety precautions have been read and understood.
 Prevention P260 – Do not breathe dust/fume/gas/mist/vapors/spray.
 P270 – Do not eat, drink, or smoke when using this product.
 P280 – Wear eye or face protection
 P264 – Wash hands thoroughly after handling.

Response
 P308 + P313 – If exposed or concerned: Get medical attention.
 P302 + P352 + P362 + P364 – If on skin: Wash with plenty of soap and water.
 Response Take off contaminated clothing and wash it before reuse.
 P332 + P313 – If skin irritation occurs: Get medical attention.
 P305 + P351 + P338 – If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 – If eye irritation persists: Get medical attention.

Storage P405 – Store locked up.

Disposal P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.

TRI-(2-CHLOROISOPROPYL)PHOSPHATE (TRI-(2-CHLOROISOPROPYL)PHOSPHATE (TRIS (2-CHLORO-1-METHYLETHYL) PHOSPHATE))

ID: 13674-84-5

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-01-17 13:39:49**

%: **1.0000 - 10.0000** GS: **BM-U** RC: **None** NANO: **No** SUBSTANCE ROLE: **Flame retardant**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	US EPA - PPT Chemical Action Plans	TSCA Work Plan chemical - ongoing chemical (risk) assessment
PBT	EHP - San Antonio Statement on BFRs & CFRs	Flame retardant substance class of concern for PB&T & long range transport

SUBSTANCE NOTES: Precautionary Statement Codes
 P264 and P501

TRIETHYL PHOSPHATE

ID: 78-40-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-01-17 13:40:52**

#: **1.0000 - 5.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Catalyst**

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

SUBSTANCE NOTES: H319: Causes serious eye irritation.

ETHYLENE GLYCOL (ETHYLENE GLYCOL (ETHANEDIOL))

ID: 107-21-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-01-17 13:41:52**

#: **Impurity/Residual** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
DEV	CA EPA - Prop 65	Developmental toxicity
DEV	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Developmental Toxicity

SUBSTANCE NOTES: Precautionary Statement Codes P264 and P501

DIETHYLENE GLYCOL (DIETHYLENE GLYCOL (2,2 -OXIBISETHANOL))

ID: 111-46-6

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-01-17 13:43:33**

#: **1.0000 - 3.0000** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Monomer**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

SUBSTANCE NOTES: Precautionary Statement Codes P264 and P501

1,1,3,3-TETRAMETHYLGUANIDINE

ID: 80-70-6

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-01-17 13:45:43**

#: **1.0000 - 2.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Catalyst**

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

SUBSTANCE NOTES: Precautionary Statement Codes P264, P280, P305+P351+P338, P405, and P501

DIBUTYLTIN BIS(LAURYL MERCAPTIDE) (DIBUTYLTIN BIS(LAURYL MERCAPTIDE) (DIBUTYLBIS(DODECYLTHIO)STANNANE))

ID: 1185-81-5

%: **0.1000 - 5.0000**GS: **LT-P1**RC: **None**NANO: **No**SUBSTANCE ROLE: **Catalyst**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
DEV	MAK	Pregnancy Risk Group B
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels

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	UL/GreenGuard Gold Certified		
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: Huntsman Building Solutions, Arlington, TX. CERTIFICATE URL: https://spot.ul.com/main-app/products/detail/606b262042558a2151d3b009?page_type=Products%20Catalog	ISSUE DATE: 2021-04-01	EXPIRY DATE: 2022-09-23	CERTIFIER OR LAB: UL
CERTIFICATION AND COMPLIANCE NOTES: Wall finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.2-2017 using a Classroom Environment with an air change of 0.82 hr ⁻¹ and a loading of 94.60 m ² . ; and Wall finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.2-2017 using an Office Environment with an air change of 0.68 hr ⁻¹ and a loading of 33.40 m ² . Product tested in accordance with UL 2821 test method to show compliance to emission limits on UL 2818. Section 7.1 and 7.2.			

LCA	Environmental Product Declaration (EPD) by UL - Product-Specific, Type III		
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: Huntsman Building Solutions, Arlington, TX. CERTIFICATE URL: https://spot.ul.com/main-app/products/detail/600f2356707850657811048d?page_type=Products%20Catalog	ISSUE DATE: 2021-01-01	EXPIRY DATE: 2026-01-01	CERTIFIER OR LAB: UL Environment
CERTIFICATION AND COMPLIANCE NOTES: Product-specific Type III EPD, made by a third party and verified externally by UL in accordance with ISO 14044, ISO 14040, ISO 14025, ISO 21930 and EN 15804.			

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

UNDISCLOSED MATERIAL

The product's second material, marked as UNDISCLOSED, is part A (A-100) of the spray foam insulation product. The material name is withheld for confidentiality purposes.

MANUFACTURER INFORMATION

MANUFACTURER: Huntsman Building Solutions
ADDRESS: 870 Boulevard du Curé-Boivin
 Boisbriand QC J7G 2A7, Canada
WEBSITE: www.huntsmanbuildingsolutions.com

CONTACT NAME: Mickel Maalouf
TITLE: Senior Representative, Sustainable Building Science
PHONE: 5148388113
EMAIL: mmaalouf@huntsmanbuilds.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)	
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.