

HPD UNIQUE IDENTIFIER: 25138

CLASSIFICATION: 07 21 19 Foamed-In-Place Insulation

PRODUCT DESCRIPTION: Heatlok Soya HFO / Polarfoam Soya HFO are two component, low GWP, closed cell, spray applied, rigid polyurethane foam systems. This foam product has been tested by an independent recognized laboratory and is the first product that surpasses the requirements outlined in the most recent and strenuous standard CAN/ULC S705.1-2015 “Standard for thermal insulation – Spray applied rigid polyurethane foam, medium density – Material Specification”. Heatlok Soya HFO/ Polarfoam Soya HFO material complies with the requirements of National Building Code of Canada and is listed by the National Research Council Canada under CCMC Listing 14078-L, since 2017 as an insulation product. This product is commonly used as a thermal insulation product, air barrier, vapour barrier for interior, exterior applications above and below grade. Heatlok Soya HFO / Polarfoam Soya HFO uses recycled plastic materials, rapidly renewable soy oils, and 4th generation blowing agent with zero ozone depleting potential and < 1 global warming potential. This product meets all the requirements of the Paris, Kyoto and Montreal protocols. Heatlok Soya HFO/ Polarfoam Soya HFO is applied exclusively by CALIBER QAP licensed installers and contractors in accordance with the standard CAN/ULC S705.2.

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 2 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	

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 LT-UNK | MUL | RES | CAN 4,4'-DIPHENYLMETHANE DIISOCYANATE LT-UNK | CAN | MUL | RES | SKI | EYE] POLYURETHANE RESIN B-SIDE [TRIS(2-CHLORO-1-METHYLETHYL) PHOSPHATE BM-U | END | MUL | PBT ETHYLENE GLYCOL BM-1 | END | DEV DIETHYLENE GLYCOL (2,2 - OXIBISETHANOL) LT-P1 | END GLYCERIN (GLYCEROL) LT-UNK 1,1,3,3-TETRAMETHYLGUANIDINE LT-UNK DIBUTYLTIN DILAURATE LT-1 | END | REP | DEV | MUL | GEN | CAN | MAM]

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

Material (g/l): 0.35 Regulatory (g/l): N/A
 Does the product contain exempt VOCs: Yes
 Are ultra-low VOC tints available: No

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.
 VOC emissions: UL/GreenGuard Gold Certified
 VOC content: UL/GreenGuard Gold Certified

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Third Party Verified? <input type="radio"/> Yes <input checked="" type="radio"/> No	PREPARER: Self-Prepared VERIFIER: VERIFICATION #:	SCREENING DATE: 2020-10-01 PUBLISHED DATE: 2021-06-22 EXPIRY DATE: 2023-10-01
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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)

GHS 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.

POLYMETHYLENE POLYPHENYL ISOCYANATE

ID: 9016-87-9

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2020-10-01 18:43:34

#: 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: GHS Hazard Statements

H315: Causes skin 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 Statement Codes

P261, P264, P271, P272, P280, P285, P302+P352, P304+340+P312, P305+P351+P338, P333+P313, P337+P313, P342+P311, P362, P403+P233, P405, and P501

4,4'-DIPHENYLMETHANE DIISOCYANATE

ID: 101-68-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2020-10-01 18:43:34

%: 30.0000 - 50.0000 GS: LT-UNK RC: None NANO: No SUBSTANCE ROLE: Intermediate

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
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
SKI	EU - GHS (H-Statements)	H315 - Causes skin irritation
EYE	EU - GHS (H-Statements)	H319 - Causes serious eye irritation
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
RES	EU - GHS (H-Statements)	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
SKI	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
RES	US EPA - PPT Chemical Action Plans	Inhalation sensitizer causing asthma and lung damage

SUBSTANCE NOTES: GHS Hazard Statements

H315: Causes skin 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 Statement Codes

P261, P264, P271, P272, P280, P285, P302+P352, P304+340+P312, P305+P351+P338, P333+P313, P337+P313, P342+P311, P362, P403+P233, P405, and P501

POLYURETHANE RESIN B-SIDE

%: 50.0000 - 50.0000

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES CONSIDERED: Yes MATERIAL TYPE: Polymeric Material

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

OSHA/HCS Status:

This material is classified hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the Substance or Mixture:

- SKIN CORROSION/IRRITATION - Category 2
- SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
- TOXIC TO REPRODUCTION (Fertility) - Category 1A
- TOXIC TO REPRODUCTION (Unborn child) - Category 1A
- AQUATIC HAZARD (ACUTE) - Category 3
- AQUATIC HAZARD (LONG-TERM) - Category 3

Hazard Statements:

- H319 - Causes serious eye irritation
- H315 - Causes skin irritation
- H360 - May damage fertility or the unborn child
- H412 - Harmful to aquatic life with long lasting effects

Prevention:

- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing
- P273 - Avoid release to the environment
- P264 - Wash hands thoroughly after handling

TRIS(2-CHLORO-1-METHYLETHYL) PHOSPHATE

ID: 13674-84-5

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-06-22 5:21:29**

#: **10.0000 - 25.0000** 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

ETHYLENE GLYCOL

ID: 107-21-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-06-22 5:31:54**

#: **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 (2,2 - OXIBISETHANOL)

ID: 111-46-6

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-06-22 5:34:13**%: **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**GLYCERIN (GLYCEROL)**

ID: 56-81-5

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-06-22 5:37:38**%: **1.0000 - 3.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Monomer**

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

SUBSTANCE NOTES:

1,1,3,3-TETRAMETHYLGUANIDINE

ID: 80-70-6

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-06-22 5:39:15**%: **1.0000 - 3.0000** 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 DILAURATE**

ID: 77-58-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-06-22 5:40:31**%: **0.1000 - 5.0000** GS: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Catalyst**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
END	ChemSec - SIN List	Endocrine Disruption
REP	EU - GHS (H-Statements)	H360FD - May damage fertility. May damage the unborn child
DEV	MAK	Pregnancy Risk Group B
REP	EU - Annex VI CMRs	Reproductive Toxicity - Category 1B
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
GEN	EU - GHS (H-Statements)	H341 - Suspected of causing genetic defects
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
MAM	EU - GHS (H-Statements)	H372 - Causes damage to organs through prolonged or repeated exposure
REP	EU - REACH Annex XVII CMRs	Toxic to Reproduction Category 2 - Substances which should be regarded as if they impair fertility or cause Developmental Toxicity in humans
REP	GHS - Japan	Toxic to reproduction - Category 1B [H360]
REP	GHS - Australia	H360FD - May damage fertility. May damage the unborn child

SUBSTANCE NOTES: GHS Hazard Statements

H360: May damage fertility; May damage the unborn child

Precautionary Statement Codes

P201, P202, P264, P280, P305+P351+P338, P308+P313, P405, and P501

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 - Boisbriand Facility 870 Boulevard du Curé-Boivin, Boisbriand QC J7G 2A7 Canada CERTIFICATE URL: https://spot.ul.com/main-app/products/catalog/?keywords=AIRM%C3%89TIC+SOYA+HFO	ISSUE DATE: 2018-11-08 EXPIRY DATE: CERTIFIER OR LAB: UL
CERTIFICATION AND COMPLIANCE NOTES: GREENGUARD GOLD Certificate Number: 133163-420 In accordance with California Department of Public Health (CDPH). Product tested in accordance with UL 2821 test method to show compliance to emission limits on UL 2818. Section 7.1 and 7.2.	

VOC CONTENT	UL/GreenGuard Gold Certified
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: Huntsman Building Solutions - Boisbriand Facility 870 Boulevard du Curé-Boivin, Boisbriand QC J7G 2A7 Canada CERTIFICATE URL: https://spot.ul.com/main-app/products/catalog/?keywords=AIRM%C3%89TIC+SOYA+HFO	ISSUE DATE: 2018-11-08 EXPIRY DATE: CERTIFIER OR LAB: UL
CERTIFICATION AND COMPLIANCE NOTES: GREENGUARD GOLD Certificate Number: 133163-420 In accordance with California Department of Public Health (CDPH). Product tested in accordance with UL 2821 test method to show compliance to emission limits on UL 2818. Section 7.1 and 7.2.	

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.

REGULATORY VOC CONTENT

The Regulatory (g/l) VOC content is marked as N/A due to our industry's different regulations which require testing VOC contents after 12h and after 30 days.

Total VOC content after 12h: 0,0000115 g/L

Total VOC content after 30 days: 0,00000194 g/L

LEED requirements: 50g/L max.

MANUFACTURER INFORMATION

MANUFACTURER: Huntsman Building Solutions
ADDRESS: 870 Boulevard du Curé-Boivin
 Boisbriand Québec J7G 2A7, Canada
WEBSITE: <https://huntsmanbuildingsolutions.com/>

CONTACT NAME: Mickel Maalouf
TITLE: Senior Representative, Sustainable Building Science
PHONE: 514-838-8113
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.