

CLASSIFICATION: 230179

created via: HPDC Online Builder

PRODUCT DESCRIPTION: Knauf Insulation Earthwool™ 1000° Pipe Insulation is a molded, heavy-density, one-piece insulation made from inorganic glass fiber bonded with ECOSE® Technology. It is produced in 3' lengths with or without a factory-applied jacket (ASJ+). This product is the only formaldehyde free glass mineral fiber pipe insulation available. ASJ+ is the our newest generation of factory applied all-service jacket composed of aluminum foil, reinforced with a glass scrim bonded to a kraft paper interleaving with a polymer outer coating layer leaving no paper exposed. A matching ASJ+ butt strip is furnished in the carton for each section. The jacket is white, and the longitudinal lap of the jacket has a self-sealing adhesive. This product is designed to be cleanable and has vastly improved durability over traditional ASJ.

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
- Per OSHA MSDS
- Other

Residuals/Impurities

- Considered
- Partially Considered
- Not Considered

Explanation(s) provided for Residuals/Impurities?
 Yes No

Are All Substances Above the Threshold Indicated:

Characterized Yes No
 Percent Weight and Role Provided?

Screened Yes No
 Using Priority Hazard Lists with Results Disclosed?

Identified Yes No
 Name and Identifier Provided?

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

COMPOSITE PRODUCT INCLUDING THE VAPOR RETARDER FACER [FIBER GLASS, BIOSOLUBLE AND/OR WITH ALKALINE OXIDE AND ALKALI EARTH OXIDE CONTENT ≤18 % BY WEIGHT LT-UNK GLUCOSE BM-3 KRAFT PAPER UNK ALUMINUM LT-P1 | RES | END | PHY AMMONIUM PHOSPHATE LT-UNK POLYPROPYLENE LT-UNK STYRENE BUTADIENE RUBBER (SBR) LT-UNK ALUMINA TRIHYDRATE (ALUMINA TRIHYDRATE) BM-2 | RES CHLORINATED FLAME RETARDANTS (CFR) NoGS | PBT FATTY ACIDS, C18-UNSATD., DIMERS, POLYMERS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE LT-P1 | MUL ANTIMONY TRIOXIDE BM-1 | MAM | CAN | AQU | MUL SILANE LT-UNK]

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:

There hundreds of pipe insulation sizes. The size used for this analysis is based upon a common pipe insulation, which is the length weighted average size produced. This HPD was done using basic inventory, but 100% of ingredients are disclosed.

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 content: Greenguard Gold
 Formaldehyde emissions: Formaldehyde Free Validation
 Recycled content: Recycled Content Validation
 LCA: EPD

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients, Option 1

Third Party Verified?

PREPARER: Self-Prepared
 VERIFIER:

SCREENING DATE: 2017-08-10
 PUBLISHED DATE: 2017-08-24

Yes
 No

VERIFICATION #:

EXPIRY DATE: 2020-08-10

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 2.1, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-1-standard

COMPOSITE PRODUCT INCLUDING THE VAPOR RETARDER FACER

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Partially

RESIDUALS AND IMPURITIES NOTES: Trace level impurities are founds in all things. We only considered that which we have the control of the manufacturing process, as described in other product notes.

OTHER PRODUCT NOTES: There are potential trace level materials in mined materials used in glass making but the level is diminimis and can vary depending on where materials are mined or sourced. There are possibly trace level materials in dextrose (corn syrup) from agricultural impacts and perhaps paper for the same reason depending on its source.

FIBER GLASS, BIOSOLUBLE AND/OR WITH ALKALINE OXIDE AND ALKALI EARTH OXIDE CONTENT ≤18 % BY WEIGHT

ID: 65997-17-3

%: 87.7400 - 87.7400	GS: LT-UNK	RC: Both	NANO: No	ROLE: The insulating portion of the composite product
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HAZARDS:	AGENCY(IES) WITH WARNINGS:
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None Found	No warnings found on HPD Priority lists
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SUBSTANCE NOTES: The is glass fiber validated by the EUCEB exoneration auditing process.

GLUCOSE

ID: 50-99-7

%: 5.2800 - 5.2800	GS: BM-3	RC: None	NANO: No	ROLE: Primary binder adhesive ingredient for the fiber glass that give the product
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HAZARDS:	AGENCY(IES) WITH WARNINGS:
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None Found	No warnings found on HPD Priority lists
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SUBSTANCE NOTES: The binder adhesive gives the product its brown color

KRAFT PAPER

ID: Not registered

%: 2.7300 - 2.7300	GS: UNK	RC: None	NANO: No	ROLE: part of the vapor retarder laminate
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HAZARDS:	AGENCY(IES) WITH WARNINGS:
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None Found	No warnings found on HPD Priority lists
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SUBSTANCE NOTES: Paper is used to give the vapor retarder strength add flexibility

ALUMINUM

ID: 7429-90-5

#: **0.8900 - 0.8900** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Part of the vapor retarder laminate**

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
RESPIRATORY	AOEC - Asthmagens	Asthmagen (ARs) - sensitizer-induced - inhalable forms only
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H228 - Flammable solid
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H250 - Catches fire spontaneously if exposed to air
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H261 - In contact with water releases flammable gases

SUBSTANCE NOTES: This is an aluminum foil, not unlike that found in households, but perhaps thinner

AMMONIUM PHOSPHATE

ID: 10124-31-9

#: **0.8800 - 0.8800** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Part of the binder adhesive mixture**

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
None Found	No warnings found on HPD Priority lists	

SUBSTANCE NOTES: Part of the binder adhesive mixture that is cured in the finished product.

POLYPROPYLENE

ID: 9003-07-0

#: **0.6800 - 0.6800** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Part of the vapor retarder laminate**

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
None Found	No warnings found on HPD Priority lists	

SUBSTANCE NOTES: Adds clean ability to the surface of the vapor retarder

STYRENE BUTADIENE RUBBER (SBR)

ID: 9003-55-8

#: **0.6800 - 0.6800** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Part of the vapor retarder laminate**

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
None Found	No warnings found on HPD Priority lists	

SUBSTANCE NOTES: This is the adhesive variety that bonds the vapor retarder laminate together.

ALUMINA TRIHYDRATE (ALUMINA TRIHYDRATE)

ID: 21645-51-2

#: **0.3400 - 0.3400** GS: **BM-2** RC: **None** NANO: **No** ROLE: **Part of the vapor retarder laminate**

HAZARDS:	AGENCY(IES) WITH WARNINGS:
RESPIRATORY	AOEC - Asthmagens Asthmagens (ARs) - sensitizer-induced - inhalable forms only

SUBSTANCE NOTES: The fire performance of this product is required to be 25FS/50SD

CHLORINATED FLAME RETARDANTS (CFR)

ID: **Not registered**

#: **0.3400 - 0.3400** GS: **NoGS** RC: **None** NANO: **No** ROLE: **Part of the vapor retarder laminate**

HAZARDS:	AGENCY(IES) WITH WARNINGS:
PBT	EHP - San Antonio Statement on BFRs & CFRs Flame retardant substance class of concern for PB&T & long range transport

SUBSTANCE NOTES: The fire performance of this product is required to be 25FS/50SD

FATTY ACIDS, C18-UNSATD., DIMERS, POLYMERS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE

ID: **68082-29-1**

#: **0.2700 - 0.2700** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Hot Melt adhesive that bonds the vapor retarder to the fiber glass base wool**

HAZARDS:	AGENCY(IES) WITH WARNINGS:
MULTIPLE	German FEA - Substances Hazardous to Waters Class 2 - Hazard to Waters

SUBSTANCE NOTES: Hot Melt adhesive that bonds the vapor retarder to the fiber glass base wool

ANTIMONY TRIOXIDE

ID: **1309-64-4**

#: **0.1400 - 0.1400** GS: **BM-1** RC: **None** NANO: **No** ROLE: **Part of the vapor retarder laminate**

HAZARDS:	AGENCY(IES) WITH WARNINGS:
MAMMALIAN	EU - R-phrases R20 - Harmful by Inhalation (gas or vapor or dust/mist)
MAMMALIAN	EU - R-phrases R22 - Harmful if Swallowed
CANCER	EU - R-phrases R40 - Limited Evidence of Carcinogenic Effects
ACUTE AQUATIC	EU - R-phrases R51 - Toxic to Aquatic Organisms
CANCER	IARC Group 2b - Possibly carcinogenic to humans
CANCER	CA EPA - Prop 65 Carcinogen
CHRON AQUATIC	EU - GHS (H-Statements) H411 - Toxic to aquatic life with long lasting effects
CANCER	EU - GHS (H-Statements) H351 - Suspected of causing cancer
MULTIPLE	ChemSec - SIN List CMR - Carcinogen, Mutagen &/or Reproductive Toxicant

SUBSTANCE NOTES: The fire performance of this product is required to be 25FS/50SD

SILANE

ID: **7803-62-5**

#: **0.0200 - 0.0200** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Cured glass coating**

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES: The silane is cured and not available as a liquid

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 CONTENT

Greenguard Gold

CERTIFYING PARTY: Third Party

APPLICABLE FACILITIES: Shelbyville, IN where the product is manufactured

CERTIFICATE URL:

<https://spot.ulprospector.com/en/na/BuiltEnvironment/Detail/32846/662416/Atmosphere-Duct-Wrap-with-ECOSE-Technology?st=1&sl=47678479&crit=SW5zdWxhdGlvbiA%2bIEtuYXVmIEluc3VsYXRpb24%3d&ss=2>

CERTIFICATION AND COMPLIANCE NOTES: Both faced and unfaced products are certified

ISSUE DATE:	EXPIRY DATE:	CERTIFIER OR LAB:
2009-11-13	2017-11-07	Greenguard UL

FORMALDEHYDE EMISSIONS

Formaldehyde Free Validation

CERTIFYING PARTY: Third Party

APPLICABLE FACILITIES: Shelbyville, Indiana where the product is manufactured

CERTIFICATE URL:

<https://spot.ulprospector.com/en/na/BuiltEnvironment/Detail/32846/662416/Atmosphere-Duct-Wrap-with-ECOSE-Technology?st=1&sl=47678479&crit=SW5zdWxhdGlvbiA%2bIEtuYXVmIEluc3VsYXRpb24%3d&ss=2>

CERTIFICATION AND COMPLIANCE NOTES:

ISSUE DATE:	EXPIRY DATE:	CERTIFIER OR LAB:
2011-07-20	2017-11-04	Greenguard UL

RECYCLED CONTENT

Recycled Content Validation

CERTIFYING PARTY: Third Party

APPLICABLE FACILITIES: Shelbyville, IN where the product is manufactured

CERTIFICATE URL:

<https://spot.ulprospector.com/en/na/BuiltEnvironment/Detail/32846/656143/Earthwool-1000-Pipe-Insulation-with-ECOSE-Technology?st=1&sl=48156413&crit=SW5zdWxhdGlvbiA%2bIEtuYXVmIEluc3VsYXRpb24%3d&ss=2>

CERTIFICATION AND COMPLIANCE NOTES:
Earthwool(R) 1000F Pipe Insulation with ASJ+
www.hpd-collaborative.org

ISSUE DATE:	EXPIRY DATE:	CERTIFIER OR LAB:
2012-08-10	2018-07-20	UI Enviromental

LCA

EPD

CERTIFYING PARTY: Third Party
 APPLICABLE FACILITIES: Shelbyville, IN where the product is manufactured
 CERTIFICATE URL:
<https://spot.ulprospector.com/en/na/BuiltEnvironment/Detail/32846/656143/Earthwool-1000-Pipe-Insulation-with-ECOSE-Technology?st=1&sl=45365577&crit=SW5zdWxhdGlvbiA%2bIEtuYXVmlEluc3VsYXRpb24%3d&ss=2>

ISSUE DATE	EXPIRY DATE	CERTIFIER OR LAB:
2014-09-12	2019-09-12	UL Environmental

CERTIFICATION AND COMPLIANCE NOTES:

OTHER

EUCEB biosoluble fiber exoneration

CERTIFYING PARTY: Third Party
 APPLICABLE FACILITIES: Shelbyville, IN where the product is manufactured
 CERTIFICATE URL:
<http://www.euceb.org/uploads/Modules/Plants/404.pdf>

ISSUE DATE	EXPIRY DATE	CERTIFIER OR LAB:
2011-10-11		http://www.euceb.org/uploads/Modules/Plants/404.pdf

CERTIFICATION AND COMPLIANCE NOTES:

OTHER

Declare Red List Free

CERTIFYING PARTY: Self-declared
 APPLICABLE FACILITIES: Shelbyville, IN where the product is manufactured
 CERTIFICATE URL: <https://access.living-future.org/earthwool%C2%AE-pipe-insulation-unfaced>

ISSUE DATE	EXPIRY DATE	CERTIFIER OR LAB:
2017-09-01		Declare LBC Program

CERTIFICATION AND COMPLIANCE NOTES: Unjacketed product only

+ 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.

BUTT STRIP TAPE

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

Tape is made of the same composition as the vapor retarder material noted in the HPD. This material is applied as a joint sealing material at the pipe insulation segments, 3 foot intervals along the length of pipe insulation installed.

+ Section 5: General Notes

There is no anticipated exposures associated with the ingredients in the laminate. It is not believed that aluminum foil is a hazard and it is not believed that fire retardants bound within the adhesive of the thin vapor retarder have exposure potential.

MANUFACTURER INFORMATION

MANUFACTURER: **Knauf Insulation, Inc.**
 ADDRESS: **One Knauf Drive**
Shelbyville IN 46176, USA
 WEBSITE: **www.knaufinsulation.us**

CONTACT NAME: **Scott Miller**
 TITLE: **Director Sustainability and Product Affairs**
 PHONE: **317-512-1016**
 EMAIL: **scott.miller@knaufinsulation.com**

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

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 Terms

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.