Arnon KSA HEATBAN XPS Thermal Insulation Board by Arnon Plastic Industries Co. Ltd.

SCREENING DATE: 2025-12-10
PUBLISHED DATE: 2025-12-10
EXPIRY DATE: 2028-12-10
PREPARER: ToxServices LLC
VERIFIER: SCS Global Services
VERIFICATION #: qGE-24786

THIRD-PARTY VERIFIED

Health Product Declaration v3.0
created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 808350720
HPD UNIQUE PRODUCT ID: Not provided.
CLASSIFICATION: 07 21 00 Thermal Insulation
PRODUCT DESCRIPTION: The Arnon KSA HEATBAN XPS Thermal Insulation Board offers superior thermal performance and durability for optimal energy efficiency. The high-density XPS panels feature a closed-cell structure that excels in heat resistance, water repellency, and compressive strength. Ideal for inverted roofs, walls, foundations, and high-load applications, these panels reduce energy consumption while enhancing comfort.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format
→ Basic Method

Threshold Disclosed Per
→ Product

Threshold Level
→ 1,000 ppm

Residuals/Impurities Evaluation
→ Completed

Explanation(s) provided :
Yes

For all contents above the threshold, the manufacturer has:

Characterized Yes
Provided weight and role.

Screened Yes
Provided screening results using HPDC-approved methods.

Identified No
Provided name and CAS RN or other identifier.

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.

PRODUCT | **MATERIAL OR SUBSTANCE** | *RESIDUAL OR IMPURITY* GREENSCREEN SCORE | HAZARD TYPE

ARNON KSA HEATBAN XPS THERMAL INSULATION BOARD [
POLYSTYRENE LT-UNK **POLYSTYRENE REGRIND (PRE-CONSUMER)**
1,1-DIFLUOROETHANE LT-1 | PBT | PHY **WHITE MINERAL OIL** LT-UNK **DIMETHYL ETHER** LT-UNK | PHY | EYE **UNDISCLOSED** LT-1 | PBT **UNDISCLOSED** BM-1 | CAN | MAM **UNDISCLOSED** LT-1 | PBT **ZINC STEARATE** LT-UNK | AQU **UNDISCLOSED** LT-P1 | MUL **UNDISCLOSED** BM-3dg | CAN | MAM **]**

Number of Greenscreen BM-4/BM3 contents ... 1

Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... LT-1, BM-1, LT-P1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

Special Conditions applied: [MixedRecycledContent]
Special Conditions applied: [Polymers]

Arnon worked with the 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

VOC Content data is not applicable for this product category.

COMPLIANCE *See Section 3 for additional listings.*

VOC emissions: CDPH Standard Method - Not tested
EPD: Environmental Product Declaration
Certificate of product conformity for Rigid Cellular Polystyrene Thermal Insulation: CERTIFICATE OF PRODUCT CONFORMITY
Certificate of Compliance - Foamed Plastic: Certificate of Compliance

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Option 1.
Pre-checked for LEED v4.1 Option 1.

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 3.0, available on the HPDC website at: www.hpd-collaborative.org/hpd-3-0-standard

ARNON KSA HEATBAN XPS THERMAL INSULATION BOARD

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

RESIDUALS AND IMPURITIES NOTES: Arnon worked with the 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.

OTHER PRODUCT NOTES:

POLYSTYRENE

ID: **9003-53-6**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2025-12-10 17:43:08**

%: **84.9400 - 84.9400** GreenScreen: **LT-UNK** RC: **None** NANO: **No** POLYMER ROLE: **Structure component**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance

POLYMER TYPE: Thermoplastic

AVERAGE MOLECULAR WEIGHT : >10,000 Da

PERCENTAGE OF POLYMER WITH MOLECULAR WEIGHT LESS THAN 500 DA: Unknown

ADDITIONAL SUBSTANCES CONSIDERED: Yes

POLYMER NOTES: This polymer has been reported in accordance to HPDC Special Conditions Policy for polymers with disclosed CAS numbers.

ADDITIONAL NOTES: Material consists of virgin polystyrene only.

POLYSTYRENE REGRIND (PRE-CONSUMER)

ID: **Mixed Recycled Content**

HAZARD DATA SOURCE: **HPDC Special Conditions Policy**

%: **15.0000 - 15.0000** GreenScreen: **Not Required** RC: **PreC** NANO: **No** MATERIAL ROLE: **Structure component**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
Hazard Screening is not applicable to this Special Condition		

INGREDIENT DESCRIPTION: Regrind of pre consumer polystyrene

ANALYTICAL TESTING: N/A

BATCH VARIATION: No, In house regrind

COUNTRY OF ORIGIN: Saudi Arabia

MATERIAL CONTENT NOTES: In house regrind
This disclosure does not provide information on the potential presence of hazardous substances which may be found in certain mixed recycled materials.

1,1-DIFLUOROETHANE

ID: **75-37-6**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-12-10 17:43:04**

%: **4.8800 - 6.2500** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Blowing agent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
PHY	Québec CSST - WHMIS 1988	Class B1 - Flammable gases
PHY	GHS - Japan	H220 - Extremely flammable gas [Flammable gases - Category 1]
PHY	GHS - New Zealand	Flammable gas category 1A

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance

SUBSTANCE NOTES:

WHITE MINERAL OIL

ID: **8042-47-5**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-12-10 17:43:05**

%: **1.6100 - 2.7000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Plasticizer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents

SUBSTANCE NOTES:

DIMETHYL ETHER

ID: **115-10-6**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-12-10 17:43:06**

%: **1.6300 - 2.0800** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Blowing agent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H220 - Extremely flammable gas [Flammable gases - Category 1]
EYE	GHS - New Zealand	Eye irritation category 2
PHY	GHS - Japan	H220 - Extremely flammable gas [Flammable gases - Category 1]
PHY	GHS - New Zealand	Flammable gas category 1A
PHY	GHS - Australia	H220 - Extremely flammable gas [Flammable gases - Category 1]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents

SUBSTANCE NOTES:

UNDISCLOSED

ID: **Polymer**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-12-10 17:43:09**

%: **0.7200 - 1.0800** GreenScreen: **LT-1** RC: **None** NANO: **No** POLYMER ROLE: **Flame retardant**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective February 1, 2025 Red List substances to avoid in Living Building Challenge V4.0 projects
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2025 Avoidance of Organohalogens and Functionally Related Chemical Classes of Concern

POLYMER TYPE: Thermoplastic

AVERAGE MOLECULAR WEIGHT : ≥1,000 Da and ≤ 10,000 Da

PERCENTAGE OF POLYMER WITH MOLECULAR WEIGHT LESS THAN 500 DA: Unknown

ADDITIONAL SUBSTANCES CONSIDERED: Yes

POLYMER NOTES: This polymer has been reported in accordance to HPDC Special Conditions Policy for polymers without disclosed CAS numbers.

ADDITIONAL 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. 3

UNDISCLOSED ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-12-10 17:43:08**

%: **0.2000 - 0.2700** GreenScreen: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Nucleating agent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 2a - Agent is probably Carcinogenic to humans
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional 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 Score of BM-1 comes from the HPDC Builder Tool. 1

UNDISCLOSED ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-12-10 17:43:09**

%: **0.1300 - 0.1900** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Flame retardant**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective February 1, 2025 Red List substances to avoid in Living Building Challenge V4.0 projects
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2025 Avoidance of Organohalogens and Functionally Related Chemical Classes of Concern

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. 4

ZINC STEARATE ID: **557-05-1**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-12-10 17:43:04**

%: **0.0600 - 0.1100** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Lubricant**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2025 Children's Toy Products

SUBSTANCE NOTES:

UNDISCLOSED ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-12-10 17:43:05**

%: **0.0700 - 0.1100** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Flame retardant**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional 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. 5

UNDISCLOSED ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-12-10 17:43:06**

%: **0.0700 - 0.1000** GreenScreen: **BM-3dg** RC: **None** NANO: **No** SUBSTANCE ROLE: **Dispersant**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional 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 Score of BM-3dg comes from the HPDC Builder Tool. 2

Section 3: 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	CDPH Standard Method - Not tested	
COMPLIANCE TYPE: Self-declared **CERTIFIER/VERIFIER/TESTING LAB/AUDITOR:** None **COMPLIANCE DETAILS:** **COMPLIANCE SCOPE:** **APPLICABLE FACILITIES:** N/A **COMPLIANCE URL:** **COMPLIANCE NOTES:**	**ISSUE DATE:** 2025-05-28	**EXPIRY DATE:** No expiration

EPD	Environmental Product Declaration	
COMPLIANCE TYPE: Third Party **CERTIFIER/VERIFIER/TESTING LAB/AUDITOR:** EPD International AB **COMPLIANCE DETAILS:** **COMPLIANCE SCOPE:** **APPLICABLE FACILITIES:** All **COMPLIANCE URL:** **COMPLIANCE NOTES:** In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021	**ISSUE DATE:** 2024-11-05	**EXPIRY DATE:** 2029-11-05

CERTIFICATE OF PRODUCT CONFORMITY FOR RIGID CELLULAR POLYSTYRENE THERMAL INSULATION	CERTIFICATE OF PRODUCT CONFORMITY	
COMPLIANCE TYPE: Third Party **CERTIFIER/VERIFIER/TESTING LAB/AUDITOR:** Dubai Central Laboratory Department (DCLD) of Dubai Municipality **COMPLIANCE DETAILS:** **COMPLIANCE SCOPE:** **APPLICABLE FACILITIES:** All **COMPLIANCE URL:** **COMPLIANCE NOTES:** In accordance with DCLD Document Ref. No. DM-DCLD-RD-DP21-2001 (IC) "General Rules for DM third party product certification system through factory assessment" ASTM- C578: 2023	**ISSUE DATE:** 2025-06-03	**EXPIRY DATE:** 2026-06-02

CERTIFICATE OF COMPLIANCE - FOAMED PLASTIC	Certificate of Compliance	
COMPLIANCE TYPE: Third Party **CERTIFIER/VERIFIER/TESTING LAB/AUDITOR:** Underwriters Laboratory **COMPLIANCE DETAILS:** **COMPLIANCE SCOPE:** **APPLICABLE FACILITIES:** All **COMPLIANCE URL:** **COMPLIANCE NOTES:** Standard for Surface Burning Characteristics for Building Materials, UL723	**ISSUE DATE:** 2021-09-01	**EXPIRY DATE:** No expiration

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

The Arnon KSA HEATBAN XPS Thermal Insulation Board offers superior thermal performance and durability for optimal energy efficiency. The high-density XPS panels feature a closed-cell structure that excels in heat resistance, water repellency, and compressive strength. Ideal for inverted roofs, walls, foundations, and high-load applications, these panels reduce energy consumption while enhancing comfort.

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **Arnon Plastic Industries Co. Ltd.**
ADDRESS: **Second Industrial City, Dammam 31545**
Dammam, Dammam 60290
COUNTRY: **Saudi Arabia**

WEBSITE: **www.arnon.com.sa**
CONTACT NAME: **Jayakandan Jayabalan**
TITLE: **Technical Director**
PHONE: **+966 13 812 2099**
EMAIL: **jai@arnon.com.sa**

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
CAN Cancer
DEV Developmental toxicity
END Endocrine activity
EYE Eye irritation/corrosivity
GEN Gene mutation
GLO Global warming
LAN Land toxicity
MAM Mammalian/systemic/organ toxicity
MUL Multiple
NEU Neurotoxicity
NF Not found on Priority Hazard Lists
OZO Ozone depletion
PBT Persistent, bioaccumulative, and toxic
PHY Physical hazard (flammable or reactive)
REP Reproductive
RES Respiratory sensitization
SKI Skin sensitization/irritation/corrosivity
UNK Unknown

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)
BM-3 Benchmark 3 (use but still opportunity for improvement)
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)
LT-1 List Translator 1 (Likely Benchmark-1)
LT-UNK List Translator Benchmark Unknown
NoGS No GreenScreen.

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, www.greenscreenchemicals.org, and Best Practices for Hazard Screening on the HPDC website (hpd-collaborative.org).

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.