KST1100CS PIR
by Kingspan insulated panel (Thailand)

Health Product Declaration v2.3

created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 958642176
CLASSIFICATION: 07 42 13.19 Insulated Metal Wall Panels
PRODUCT DESCRIPTION: KST1100CS PIR Coldstore Panel has been designed specifically for use for use within temperature controlled and hygiene safe environments where performance is critical, such as food processing, freezers, cold/chill store and clean rooms for the bio-technology and pharmaceutical industries. Suitable for walls and ceilings, the panels can be laid vertically or horizontally.

Section 1: Summary

Nested 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 Evaluation
- ( ) Completed
- (•) Not Completed

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

For all contents above the threshold, the manufacturer has:

Characterized (•) Yes ( ) No
Provided weight and role.

Screened (•) Yes ( ) No
Provided screening results using HPDC-approved methods.

Identified (•) Yes ( ) 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.

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

STEEL [AISI 10B21 STEEL NoGS **] POLYISOCYANURATE FOAM (PIR) [POLYMETHYLENE POLYPHENYL ISOCYANATE** LT-UNK | CAN | RES | EYE | SKI | MAM **POLYETHER POLYOL** NoGS *PENTANE* LT-P1 | MUL | PHY | AQU | MAM | EYE **DIETHYLENE GLYCOL** LT-P1 | END | MAM | REP **ETHYLENE GLYCOL** LT-1 | END | DEV | MAM | EYE | SKI **]**

Number of Greenscreen BM-4/BM3 contents ... 0

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

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.3, and discloses any possible hazards associated with all substances present at or above the appropriate unit of measurement in the finished product, along with the role and percent weight. Therefore, this HPD qualifies for LEED v4.1 MR credit: Building Product Disclosure and Optimization - Material Ingredients.

PFAS DETAILS:

This product does **not** contain intentionally added PFAS, but it is **unknown** if PFAS is contained in materials or substances from suppliers.

Attestation:

Karom

2025-04-23

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: CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario

CONSISTENCY WITH OTHER PROGRAMS

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

Third Party Verified?
- ( ) Yes
- (•) No

PREPARER: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2025-04-17
PUBLISHED DATE: 2025-04-23
EXPIRY DATE: 2028-04-17

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 2.3, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-3-standard

STEEL %: 52.0000 - 81.0000

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: No MATERIAL TYPE: Metal

RESIDUALS AND IMPURITIES NOTES: There are no known residuals or impurities and there are none listed on their MSDS.

OTHER MATERIAL NOTES: Steel Surface use pre-painted metallic coated steel coil, 0.4 to 0.7 mm thickness, normally use 25 microns polyester coated with ZM or AZ metallic coated. The weight of steel used per panel unit area is same however ratio varies due to core thickness (50 to 200 mm).

AISI 10B21 STEEL ID: 12597-69-2

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-04-18 4:00:08**

%: **100.0000** GreenScreen: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Alloy element**

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

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES:

POLYISOCYANURATE FOAM (PIR) %: 19.0000 - 48.0000

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: No MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: There are no known residuals or impurities and there are none listed on their MSDS.

OTHER MATERIAL NOTES: The variability in weight ratio is due to thickness (50-200 mm).
Thickness is determined by application needs.

POLYMETHYLENE POLYPHENYL ISOCYANATE ID: 9016-87-9

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-04-18 3:09:35**

%: **61.3706 - 62.0797** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Structure component**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
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
EYE	GHS - New Zealand	Eye irritation category 2
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	GHS - Australia	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
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 - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
MAM	GHS - New Zealand	Acute inhalation toxicity category 2
MAM	Québec CSST - WHMIS 1988	Class D1A - Very toxic material causing immediate and serious toxic effects
MAM	GHS - Australia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
MAM	GHS - Japan	H330 - Fatal if inhaled [Acute toxicity (inhalation: dust, mist) - Category 2]
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

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	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 All Products

SUBSTANCE NOTES:

POLYETHER POLYOL

ID: **39072-02-1**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-04-23 2:23:40**

%: **34.0948 - 34.4887** GreenScreen: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Flame retardant**

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

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES:

PENTANE

ID: **109-66-0**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-04-23 1:43:56**

%: **2.5867 - 3.0344** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
EYE	GHS - New Zealand	Eye irritation category 2
AQU	GHS - Australia	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
AQU	GHS - Japan	H401 - Toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 2]
PHY	GHS - New Zealand	Flammable liquids category 2
PHY	GHS - Japan	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
PHY	GHS - Malaysia	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
PHY	GHS - Australia	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
AQU	GHS - Malaysia	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]
MAM	GHS - Malaysia	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]
MAM	GHS - Australia	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - 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:

DIETHYLENE GLYCOL ID: **111-46-6**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-04-23 2:17:44**

%: **0.2587 - 0.8553** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Solvent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
REP	GHS - Japan	H361 - Suspected of damaging fertility or the unborn child [Toxic to reproduction - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 Cosmetics and Personal Care Products

SUBSTANCE NOTES:

ETHYLENE GLYCOL ID: **107-21-1**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-04-23 2:30:41**

%: **0.4790 - 0.6856** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Catalyst**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
DEV	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Developmental Toxicity
DEV	CA EPA - Prop 65	Developmental - specific to chemical form or exposure route
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
EYE	GHS - New Zealand	Eye irritation category 2
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]

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

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 — **CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Wall and Ceiling
CERTIFICATE URL:

ISSUE DATE: 2025-04-03 00:00:00
EXPIRY DATE:

CERTIFIER OR LAB: TUV Rheinland

CERTIFICATION AND COMPLIANCE NOTES: Test results meet CDPH acceptance criteria.

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

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **Kingspan insulated panel (Thailand)**
ADDRESS: **999/9 Uthai, Uthai District**
Ayutthaya, Ayutthaya 13210
COUNTRY: **Thailand**
LATITUDE: **14.3289000**
LONGITUDE: **100.6898000**

WEBSITE: **www.kingspan.com**
CONTACT NAME: **Karom Techatararak**
TITLE: **Technical Services Engineer**
PHONE: **+66831529544**
EMAIL: **karom.techatararak@kingspan.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
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.