

CLASSIFICATION: 06 20 00.00 WOOD, PLASTICS, AND COMPOSITES: FINISH CARPENTRY

PRODUCT DESCRIPTION: KIREI BOARD IS A STRONG, LIGHTWEIGHT, DURABLE, ENVIRONMENTALLY FRIENDLY SUBSTITUTE FOR WOOD – GREAT FOR A UNIQUE FINISH IN FURNITURE, CABINETRY, CASEWORK, AND INTERIOR DESIGN ELEMENTS. MANUFACTURED FROM RECLAIMED SORGHUM STRAW AND NO-ADDED-FORMALDEHYDE ADHESIVE, KIREI BOARD BRINGS A BEAUTIFUL NEW ELEMENT TO MODERN INTERIOR DESIGN.

Section 1: Summary

CONTENT INVENTORY

Threshold per material	Residuals and impurities considered in 1 of 1 materials	Based on the selected Content Inventory Threshold:	
<input type="radio"/> 100 ppm	<input checked="" type="radio"/> see Section 2:	Characterized.....	<input checked="" type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> 1,000 ppm	Material Notes	Are the Percent Weight and Role provided for all substances?	
<input type="radio"/> Per GHS SDS	<input checked="" type="radio"/> see Section 5:	Screened.....	<input checked="" type="radio"/> Yes <input type="radio"/> No
<input type="radio"/> Per OSHA MSDS	General Notes	Are all substances screened using Priority Hazard Lists with results disclosed?	
<input type="radio"/> Other		Identified.....	<input checked="" type="radio"/> Yes <input type="radio"/> No
		Are all substances disclosed by Name (Specific or Generic) and 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.

Number of Greenscreen BM-4/BM3 contents..... 2
 Contents highest concern GreenScreen Benchmark or List translator Score..... LT-UNK
 Nanomaterial..... No

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

KIREI BOARD [SORGHUM UNK POPLAR UNK
 CALCIUM CARBONATE BM-3 WATER BM-4 POLYVINYL ACETATE (PVA) LT-UNK METHYLENE BISPHENYL DIISOCYANATE (PURE MDI) LT-UNK | MAM | EYE | SKI | CAN | RES | MUL POLYMERIC MDI (PMDI) LT-UNK | RES | MUL | CAN]

INVENTORY AND SCREENING NOTES:

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.0, and discloses hazards associated with all substances present at or above 1000 parts per million (ppm), along with the role and percent by weight in the finished product. Therefore, this HPD qualifies for the LEED v4 MR credit Building Product Disclosure and Optimization: Material Ingredient Reporting (Option 1).

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE

VOC emissions: Emission Test Report

See Section 3 for additional listings.

<input checked="" type="radio"/> Self-Published*	VERIFIER:	SCREENING DATE: December 16, 2016	EXPIRY DATE*: December 28, 2019
<input type="radio"/> Third Party Verified	VERIFICATION #:	RELEASE DATE: December 28, 2016	* or within 3 months of significant change in product contents
*See HPDC website for details			



Section 2: Content in Descending Order of Quantity

This section lists materials in a product and the substances in each material based on the Inventory Threshold for each material. If residuals or impurities from the manufacturing or extraction processes are considered for a material, these are inventoried and characterized to the extent described in the Material and/or General Notes. Chemical substances are screened against the HPD Priority Hazard Lists for human and environmental health impacts. Screening is based on best available information; "Not Found" does not necessarily mean there is no potential hazard associated with the product or its contents. More information about Priority Hazard Lists and the GreenScreen can be found online: www.hpd-collaborative.org and www.greenscreenchemicals.org.

KIREI BOARD

#: 100.0000

HPD URL:

Inventory Threshold: 1000 ppm

Residuals Considered: Yes

Material Notes: No residuals or impurities are known or expected to be present in the final product at or above 1000 ppm that would trigger a GreenScreen score of BM-1, LT-1, or LT-P1, based on Supplier MSDS/SDS and as reviewed in Pharos CML.

SORGHUM

ID:

#: 89.0000 - 90.0000

GS: UNK

RC: None

NANO: NO

ROLE: Substrate

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES: Kirei Board is manufactured using reclaimed sorghum stalks left over after harvest for food. This rapidly renewable raw material makes Kirei Board a beautiful finish material that helps reduce pressure on forests and landfills.

POPLAR

ID:

#: 4.5000 - 5.0000

GS: UNK

RC: None

NANO: NO

ROLE: Substrate

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES:

CALCIUM CARBONATE

ID: 471-34-1

#: 2.0000 - 6.0000

GS: BM-3

RC: None

NANO: NO

ROLE: Binder Component

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES: Identified on the US EPA Safer Chemical Ingredient List. Percent range given based on different ratios of binders used to achieve the various thicknesses of Kirei Board available (6-30 mm).

WATER

ID: 7732-18-5

%: 1.2000 - 3.5000

GS: BM-4

RC: None

NANO: NO

ROLE: Binder: Solvent, Diluent

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES:

POLYVINYL ACETATE (PVA)

ID: 9003-20-7

%: 0.9000 - 3.0000

GS: LT-UNK

RC: None

NANO: NO

ROLE: Binder Component

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES: Percent range given based on different ratios of binders used to achieve the various thicknesses of Kirei Board available (6-30 mm).

METHYLENE BISPHENYL DIISOCYANATE (PURE MDI)

ID: 101-68-8

%: 0.8000 - 2.6000

GS: LT-UNK

RC: None

NANO: NO

ROLE: Binder Component

HAZARDS:

AGENCY(IES) WITH WARNINGS:

MAMMALIAN

EU - R-phrases

R20 - Harmful by Inhalation (gas or vapor or dust/mist)

EYE IRRITATION

EU - R-phrases

R36 - Irritating to eyes

SKIN IRRITATION

EU - R-phrases

R38 - Irritating to skin

CANCER

EU - R-phrases

R40 - Limited Evidence of Carcinogenic Effects

RESPIRATORY

EU - R-phrases

R42 - May cause sensitization by inhalation

SKIN SENSITIZE

EU - R-phrases

R43 - May cause sensitization by skin contact

ORGAN TOXICANT

EU - R-phrases

R48: Danger of serious damage to health by prolonged exposure.

RESPIRATORY

AOEC - Asthmagens

Asthmagen (G) - generally accepted

RESTRICTED LIST

US EPA - PPT Chemical Action Plans

EPA Chemical of Concern - Action Plan published

SKIN IRRITATION

EU - GHS (H-Statements)

H315 - Causes skin irritation

SKIN IRRITATION

EU - GHS (H-Statements)

H317 - May cause an allergic skin reaction

EYE IRRITATION

EU - GHS (H-Statements)

H319 - Causes serious eye irritation

RESPIRATORY	EU - GHS (H-Statements)	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
CANCER	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
RESPIRATORY	US EPA - PPT Chemical Action Plans	Inhalation sensitizer causing asthma and lung damage
CANCER	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
RESPIRATORY	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization

SUBSTANCE NOTES: MDI has become the industry standard to replace the formaldehyde based resins used in the composite board industry. All board products undergo a complete curing process before reaching the marketplace. Completely cured products are fully reacted and therefore are considered to be inert and non-toxic (Krone & Klinger, 2005). The EPA Action Plan for MDI And Related Compounds [RIN 2070-ZA15] "focuses on concerns for unreacted uncured products." Percent range given based on different ratios of binders used to achieve the various thicknesses of Kirei Board available (6-30 mm).

POLYMERIC MDI (PMDI)

ID: 9016-87-9

%: 0.7000 - 4.4000 GS: LT-UNK RC: None NANO: NO ROLE: Binder Component

HAZARDS:

AGENCY(IES) WITH WARNINGS:

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

SUBSTANCE NOTES: MDI has become the industry standard to replace the formaldehyde based resins used in the composite board industry. All board products undergo a complete curing process before reaching the marketplace. Completely cured products are fully reacted and therefore are considered to be inert and non-toxic (Krone & Klinger, 2005). The EPA Action Plan for MDI And Related Compounds [RIN 2070-ZA15] "focuses on concerns for unreacted uncured products." Percent range given based on different ratios of binders used to achieve the various thicknesses of Kirei Board available (6-30 mm).

 **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

Emission Test Report

CERTIFYING PARTY: Self-declared

APPLICABLE FACILITIES: Shenyang, Liaoning, China

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES: Report No. K08-E008;
Measurement methods according to JIS A1901(2009): Determination of
the emission of volatile organic compounds and aldehydes for building
product - Small chamber method.

ISSUE

DATE: 2014-
09-29

EXPIRY

DATE: 0000-
00-00

CERTIFIER OR LAB:

KOYOSANGYO Co., Ltd.

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.

Section 5: General Notes



MANUFACTURER INFORMATION

MANUFACTURER: Kirei USA

CONTACT NAME: Leigh Anne Magnatta

ADDRESS: 412 N. Cedros Ave.
Solana Beach, CA 92075
USA

TITLE: VP Operations

PHONE: 619-236-9924

WEBSITE: www.KireiUSA.com

EMAIL: leighanne@kireiusa.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) BM-2
Benchmark 2 (use but search for safer substitutes)

LT-1 List Translator Likely Benchmark 1

BM-1 Benchmark 1 (avoid - chemical of high concern)

LT-UNK List Translator Benchmark Unknown (insufficient
information from List Translator lists to benchmark)

BM-U Benchmark Unspecified (insufficient data to benchmark)

UNK Unknown (no data on List Translator Lists)

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

Nano Composed of nanoscale particles or nanotechnology

Declaration Level

Self-declared Manufacturer's self-declaration (First Party)

Independent Lab Manufacturer's self-declaration using results from an independent lab

Second Party Verification by trade association or other interested party

Third Party Verification by independent certifier

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 does not provide an assessment of health impacts throughout the product life cycle. It does not provide an assessment of exposure or risk associated with product handling or use. It also does not address potential health impacts of: (i) substances used or created during the manufacturing process unless they remain in the final product, or (ii) substances created after the product is delivered for end use (e.g., if the product burns, degrades, or otherwise changes chemical composition).

The HPD Open Standard was created and is maintained and evolved by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry. The HPD Collaborative is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

A disclosure completed in compliance with the HPD Open Standard is referred to as a "Health Product Declaration," or "HPD." 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 Open Standard noted.