

# Kirei Bamboo

## material safety data sheet

Effective Date: 5/1/08



### PART I: PRODUCT IDENTIFICATION

**Product:** Kirei Bamboo Plywood, Panels, Veneer and Countertops  
**Synonyms:** Bamboo Plywood, Furniture panel  
**Trade Names:** Kirei Bamboo, Kirei Bamboo Veneer, Kirei Bamboo Countertops

**Manufacturer:** Kirei USA, LLC  
**Corporate Office:** 412 N. Cedros Ave.  
Solana Beach, CA 92075  
www.kireiusa.com

**Non-Emergency phone:** 619-236-9924

**In Case of Emergency:** Dial 911

### PART II: HAZARDOUS INGREDIENTS

Name	CAS#	%	Agency	Exposure limits	Comments
Bamboo <sup>(1)</sup>	N/A	88-89%	OSHA OSHA ACGIH ACGIH	PEL-TWA 15 mg/m <sup>3</sup> PEL_TWA 5mg/m <sup>3</sup> TLV-TWA 3mg/m <sup>3</sup> TLV-STEL 10mg/m <sup>3</sup>	Total Dust Respirable Dust Fraction Respirable Dust Fraction Inhalable Particles
Urea <sup>(2)</sup>	9011-05-6	10-11	OSHA	PEL-TWA 0.75 ppm	Free gaseous formaldehyde
Formaldehyde			OSHA	PEL-STEL 2 ppm	Free gaseous formaldehyde
Solids			ACGIH	TLV- Ceiling 0.3 ppm	Free gaseous formaldehyde

(1) Bamboo is a member of the grass family which has distinct anatomical differences from that of wood. Therefore, bamboo would be regulated as an organic dust in a category known as "Particulates Not Otherwise Regulated" (PNOR), or Nuisance Dust. By OSHA. The ACGIH classifies dust or particulate in this category as "Particulates Not otherwise Specified".

(2) Contains less than 0.1% free formaldehyde

### PART III: PHYSICAL PROPERTIES

**Description:** Unfinished plywood panels, veneers and countertops consisting of bamboo layers and veneers bonded using low-emitting adhesives. Generally used in cabinets, furnishings, flooring, and in other non-structural applications. Typically provided as veneers, 4' X 8' panels and countertops. Other dimensions of bamboo plywood and veneers are available. Thickness of products range from 1/42" of an inch to over 1".

**Specific gravity:** Usually less than 1, but varies depending on moisture content.

**Boiling point:** Not applicable.

**Solubility in water:** Insoluble.

**Appearance/Odor:** Light to dark in color. Color and odor vary by species and grain style

### PART IV: FIRE AND EXPLOSION DATA

**Flash point:** N/A

**Autoignition temperature:** Varies (typically 400° F to 500° F)

**Explosive limits in air:** N/A

**Extinguishing dry media:** Water, carbon dioxide, sand or chemical

**Special firefighting procedures:** Follow established procedures for extinguishing wood source fire.

**Unusual fire and explosion hazard:** Bamboo plywood, panels and veneers do not present an explosion hazard. Sawing, sanding, or machining of bamboo plywood can produce dust as a by-product which may present an explosion hazard if a dust cloud contacts an ignition.

### PART V: REACTIVITY DATA

**Stability:** Stable under normal conditions.

**Incompatibility:** Avoid contact with strong oxidizing agents and drying oils. Avoid open flame. Product may ignite at temperatures in excess of 400° F, depending on length of time of exposure.

**Hazardous decomposition products:** Thermal decomposition products include carbon monoxide, carbon dioxide, aliphatic aldehydes, osin acids, terpenes, and polycyclic aromatic hydrocarbons.

**Conditions to avoid:** Avoid open flames or other ignition source.

**Storage:** In a cool, dry place, away from ignition sources. Provide adequate ventilation

### PART VI: HEALTH AND HAZARD DATA:

**Eye contact:** Bamboo dust can cause mechanical irritation.

**Skin contact:** Bamboo dust may evoke allergic contact dermatitis in sensitized individuals.

**Ingestion:** Not likely to occur.

**Inhalation:** Bamboo dust may cause nasal dryness and/or irritation. Coughing, sneezing, wheezing, sinusitis, prolonged colds, and headaches have also been reported. May aggravate preexisting respiratory conditions or allergies. Bamboo dust may cause nasal obstruction.

**Chronic effects:** Depending on species, wood dust may cause dermatitis on prolonged, repetitive contact. Bamboo dust may cause respiratory irritation. Respiratory disorders may be aggravated by exposure.

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## PART VI: HEALTH AND HAZARD DATA (Cont.):

- NTP - Group 2:** Reasonably anticipated to be a carcinogen.  
 A) Limited evidence of carcinogenicity from studies in humans which indicates that causal relationship is credible.  
 B) Sufficient evidence of carcinogenicity from studies in experimental animals
- IARC - Group 2A:** Probably carcinogenic to humans; limited human evidence and sufficient evidence in experimental animals. Studies of cancer incidence among workers in a wide variety of occupations have failed to convincingly show carcinogenic activity of formaldehyde in humans.  
 Gaseous formaldehyde has been shown to cause cancer in certain laboratory animals after long term exposure to very high concentrations (14+ ppm), far above the levels of formaldehyde gas emitted by this product.

## PART VII: PRECAUTIONS AND SAFE HANDLING

- Ventilation:** Provide adequate ventilation and exhaust to keep airborne contaminant concentration levels below the OSHA PELs.
- Personal protective equipment:** Wear goggles or safety glasses when manufacturing or machining any wood product. Wear NIOSH/MSHA approved respirator when the allowable limits may be exceeded. Other protective equipment, such as gloves and outer garments may be needed, depending on dust conditions.
- Fire prevention:** Avoid open flames or other ignition sources. Keep fire extinguisher readily available.

## PART VIII: EMERGENCY AND FIRST AID PROCEDURES

- Eyes:** Flush with large amounts of water. Remove to fresh air. If irritation persists, seek medical attention.
- Skin:** Wash affected area with soap and water. If rash, persistent irritation, or dermatitis occurs, seek medical attention.
- Inhalation:** Remove to fresh air. Get medical advice if persistent irritation, severe coughing, or breathing difficulty occurs.
- Ingestion:** Not applicable.

## PART IX: SPILL, LEAK, STORAGE, AND DISPOSAL

- Important:** Pick up, vacuum, or sweep spills for recovery and/or disposal. Avoid creating dusty conditions. Provide good ventilation where dust conditions cannot be avoided during cleanup. Place recovered dust in a container for proper disposal. Dispose in accordance with Federal, State, and Local regulations. Disposal is the responsibility of the generator.

## PART X: KEY TO COMMONLY USED ACRONYMS:

- ACGIH:** American Conference of Government & Industrial Hygienists  
**EPA:** Environmental Protection Agency  
**HUD:** US Department of Housing & Urban Development  
**IARC:** International Agency for Research on Cancer  
**LEL:** Lowest explosion limit  
**Mg/m<sup>3</sup>:** Milligrams per cubic meter  
**MSDS:** Material Safety Data Sheet  
**NTP:** National Toxicology Program  
**OSHA:** Occupational Safety & Health Administration  
**PEL:** Permissible exposure limit  
**PPM:** Parts per million  
**STEL:** Short term exposure limit  
**TLV:** Threshold limit value  
**TWA:** Time weighted average

## PART XI: USER RESPONSIBILITY

- Important:** This information is offered in good faith. It is believed to be accurate and has been compiled from sources believed to be reliable. It is offered for your consideration, investigation, and verification. Kirei USA, LLC makes no warranty of any kind, expressed or implied, concerning the accuracy or completeness of the information and data herein. Furthermore, Kirei USA, LLC will not be liable for claims relating to any party's use of, or reliance on information and data contained herein, regardless of whether it is claimed that the information and data are inaccurate, incomplete, or otherwise misleading.

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