



**ENGINEERED
WOODS**



MATERIAL SAFETY DATA SHEET

REVISION DATE: 08/24/2011

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1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY / UNDERTAKING

PRODUCT NAME: ZIP SYSTEM™ ROOF & WALL SHEATHING
ZIP SYSTEM™ R-SHEATHING

PRODUCT USE: Structural composite wood panel products with built-in protective overlays, bonded with resins and wax and used in exterior wall and roof sheathing applications.

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2. HAZARDS IDENTIFICATION

HAZARD OVERVIEW: Contact with strong oxidizers or exposure to temperatures greater than 400° F may cause a fire. Smoke from combustion of product may contain carbon monoxide, aldehydes, and other toxic materials. Airborne wood and resin dust may explode when combined with an ignition source. Wood dust may cause upper respiratory tract, eye, and skin irritation.

Additional notes for ZIP SYSTEM™ R-SHEATHING only: Freshly expanded or heated foam may off-gas some pentane-blowing agent, which is heavier than air and may accumulate to ignitable concentrations if stored inside a sealed container or within confined areas. Ignitable atmospheres have concentrations that exceed inhalation exposure limits for workers, further reinforcing the need for ventilation when foam is freshly expanded. This off-gassing is not expected in a fully cured finished product.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Wood dust may cause temporary irritation to eyes. Symptoms include itching, redness and tearing.

SKIN CONTACT: Wood dust may cause allergic contact dermatitis in sensitized individuals. If an allergy pre-exists or develops, it may be necessary to remove the sensitized worker from further exposure to wood dust.

INGESTION: No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed.

INHALATION: Wood dust may cause nasal dryness, irritation, coughing, headaches and sinusitis. Exposure may result in allergic responses in sensitive individuals

CARCINOGENICITY: This product is not listed as a carcinogen by the IARC, NTP or OSHA.

POTENTIAL ENVIRONMENTAL EFFECTS: This product is not expected to cause an environmental hazard as a result of its intended use, disposal, or incineration.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS #	Percent Weight In Article	Exposure Limits	Comments
Wood and wood dust (softwood and hardwood) may consist of a variety of species but not Western Red Cedar	NA	73 - 83	OSHA PEL-TWA: 15 mg/m ³ OSHA PEL-TWA: 5 mg/m ³ ACGIH TLV-TWA: 1 mg/m ³	Total dust Respirable dust fraction Inhalable fraction
Polymeric Diphenylmethane Diisocyanate (MDI) Resin Fully cured finished product does not contain free or active Polymeric Diphenylmethane Diisocyanate	9016-87-9	1 - 10	None Established	
Polymeric Phenol-formaldehyde Resin Solids Formaldehyde (less than 0.01% of free formaldehyde in finished product)	9003-35-4 50-00-0	1 - 5 < 0.01	None Established OSHA PEL-TWA: 0.3 ppm	Free formaldehyde (gaseous)
Wax or Wax Emulsion	NA	0 - 2	None Established	
Overlay (Kraft Paper impregnated with phenol-formaldehyde resin)	NA	< 0.1	None Established	
---ADDITIONAL INGREDIENTS in ZIP SYSTEM™ R-SHEATHING panels only---				
Polyiso foam containing: Isocyanurate homopolymer †	NA	15 - 20	None Established	
Normal Pentane (blowing agent) †	109-66-0	< 0.6	OSHA PEL-TWA: 2950 mg/m ³ ACGIH TLV-TWA: 1410 mg/m ³	
Felt facer (composite of wood pulp and glass fibers), containing: Fiberglass † Pigment (Carbon Black) †	65997-17-3 1333-86-4	0.25 0.125	OSHA PEL-TWA: 15 mg/m ³ OSHA PEL-TWA: 5 mg/m ³ ACGIH TLV-TWA: 5 mg/m ³ OSHA PEL-TWA: 3.5 mg/m ³ ACGIH TLV-TWA: 3.5 mg/m ³	Total dust Respirable dust fraction Inhalable fraction
Non-hazardous ingredients make up the remainder of the product.				

Notes:

† These ingredients are additional components used in ZIP SYSTEM™ R - SHEATHING

4. FIRST AID MEASURES

EYE CONTACT: Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes.

SKIN CONTACT: Wash skin with soap and water.

INGESTION: Rinse mouth with water. Do not induce vomiting. Immediate first aid is not likely required.

GENERAL ADVICE: Wood dust may aggravate pre-existing skin, eye and respiratory conditions or allergies. In case of doubt or when symptoms persist, seek medical attention.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Water, dry chemical, sand, and other agents listed for a wood fire (Type A fire). Use an extinguisher rated for a Type A fire.

UNSAFE EXTINGUISHING MEDIA: None.

SPECIAL EXPOSURE HAZARDS: Dust explosion is strongly possible if airborne concentrations of combustible dust exceed 30-60 g/m³ and if there is an ignition source present (flame, heat, static discharge, etc.). Wood dust may explode when in contact with strong acids and oxidants. Burning of this product can produce irritating and potentially toxic fumes and gases including carbon monoxide, nitrogen oxides, cyanide, aldehyde, organic acid and other products of wood combustion. Partially burned dust is especially hazardous if dispersed into the air. Wood dust should be wet down to reduce likelihood of ignition or dispersion. Remove burned dust to open; secure area after fire is extinguished.

SPECIAL PROTECTIVE EQUIPMENT: Firefighters should wear protective clothing and use equipment that is suitable for the materials involved in the surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wood dust may cause temporary irritation to eyes, skin nose and throat. Use safety glasses, gloves and NIOSH/OSHA approved respirator where ventilation is not possible and exposure limits could be exceeded. Avoid contact with eyes and skin.

ENVIRONMENTAL PRECAUTIONS: This product is not expected to cause an environmental hazard as a result of its intended use, disposal, or incineration.

CLEAN UP METHODS: There are no containment procedures for this product in its purchased form. For sanding, sawing or machining of wood products, sweep or vacuum dust for recovery or disposal. Wet down accumulated wood dust to reduce the likelihood of ignition or dispersion of dust in the air. Use with adequate ventilation. Do not inhale dust during clean-up. Use NIOSH/OSHA approved respirator where ventilation is not possible and exposure limits could be exceeded.

7. HANDLING AND STORAGE

HANDLING: For sanding, sawing or machining of wood products, avoid creating dust, which can be a source of fire and explosion. Avoid breathing dust. Wood dusts should be wet down to reduce the likelihood of ignition or dispersion of dust in the air. Use NIOSH/OSHA approved respirator where ventilation is not possible and exposure limits could be exceeded. Wash thoroughly after handling. Wash clothing before reuse

STORAGE: Wood products are combustible and should not be subjected to temperatures exceeding the auto ignition temperature. This product should not be stored where exposure to water may occur. Store this product in a cool dry area.

Additional notes for ZIP SYSTEM™ R-SHEATHING only: Pentane vapors may be emitted from freshly produced foam or

when product is heated. Pentane concentrations between the lower and upper explosive limits (LEL and UEL) may accumulate under unique circumstances inside a sealed container or within confined areas. If such concentrations are provided a source of ignition, there may be a very high rate of flame propagation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Due to the potential of wood dust ignition when suspended in air, precautions should be taken during sawing, sanding, or machining of wood products to prevent sparks or other ignition sources in ventilation equipment. Provide local exhaust as necessary to meet OSHA requirements for wood dust exposure.

EYE PROTECTION: Wear safety glasses with side shields or dust resistant safety goggles.

SKIN AND BODY PROTECTION: Wear leather work gloves and coveralls to prevent skin irritation. Remove and wash dust contaminated clothing before reuse.

HAND PROTECTION: Gloves should be worn to prevent skin contact.

RESPIRATORY PROTECTION: Use NIOSH / OSHA approved respirator where ventilation is not possible and exposure limits for wood dust may be exceeded.

HYGIENE MEASURES: Handle in accordance with good industrial hygiene and safety practice.

ENVIRONMENTAL EXPOSURE: This product is not expected to cause an environmental hazard as a result of its intended use, disposal, or incineration.

9. PHYSICAL CHEMICAL PROPERTIES

APPEARANCE: Dependent on wood species

ODOR: Dependent on wood species

FLASH POINT: Not Applicable

DENSITY: <1.0 g/cm³, 20° C

AUTO-IGNITION TEMPERATURE: 204-260°C (400-500°F) **UPPER FLAMMABLE LIMITS:** Undetermined

LOWER FLAMMABLE LIMITS: 40 g/m³ (LEL) wood dust

10. STABILITY AND REACTIVITY

STABILITY: Stable under ambient temperature (21°C) and pressure (760 mm Hg).

CONDITIONS TO AVOID: Wood dust generated from sawing, sanding, or machining the product is extremely combustible. Keep in a cool dry place away from ignition sources.

MATERIALS TO AVOID: Keep away from high temperatures, strong oxidizers (such as concentrated nitric acid, hydrogen peroxide, and chlorine), and drying oils (such as linseed oil).

HAZARDOUS DECOMPOSITION PRODUCTS: Burning of this product can produce irritating and potentially toxic fumes and gases including carbon monoxide, nitrogen oxides, cyanide, aldehyde, organic acid and other products of wood combustion.

11. TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY: Wood dust: The IARC and NTP classify wood dust as a human carcinogen. Nasal carcinoma has been reported by workers in furniture industries and an increase of Hodgkin's disease has been reported in other wood working industries, especially in sawmills. Wood dust may cause skin, eye, and respiratory tract irritation and sensitization. People with existing respiratory tract ailments should avoid exposures to wood dust as they may experience severe irritation and difficulty in breathing.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: This product is not expected to pose an ecological hazard as a result of their intended uses.

13. DISPOSAL CONSIDERATIONS

DISPOSAL: If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. Incinerate or dispose in accordance with local, state, and federal laws and regulations.

14. TRANSPORT INFORMATION

DOT: This product is not regulated as a hazardous material by the United States Department of Transportation.

15. REGULATORY INFORMATION

NFPA:	HEALTH: 1	FLAMMABILITY: 0	REACTIVITY: 0
HMIS:	HEALTH: 1	FLAMMABILITY: 0	PHYSICAL HAZARD: 0

OSHA: Wood products are not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, wood dust generated by sawing, sanding or machining this product may be hazardous.

16. OTHER INFORMATION

The information contained in the Safety Data Sheet to the best of Huber Engineered Woods' knowledge and belief as of the date indicated is believed to be accurate and reliable. However, no representation, warranty, or guarantee is implied or expressed regarding the accuracy, reliability, or completeness of this information or the use of the product. Nothing contained herein should be construed as a recommendation to use this product in conflict with national or local regulations or existing patents covering any material or its use.

END OF MATERIAL SAFETY DATA SHEET