Date of Issue: 05/24/21

SAFETY DATA SHEET

Section 1. Identification	
Product Identifier:	**Interior Fiber-Cement (Medium Density)** –HardieBacker® cement board, HardieBacker® ¼" board, HardieBacker® 250 cement board, HardieBacker® EZ Grid® cement board, HardieBacker® 500 cement board, HardieFloor ™ Wet Area Solution
Manufacturer Name, Address and Phone Number:	James Hardie Building Products 231 S. LaSalle Street, Suite 2000 Chicago, IL 60604 1-800-942-7343 (1-800-9HARDIE)
Emergency Phone Number:	1-800-942-7343 (1-800-9HARDIE)
Recommended Use:	Interior Fiber-Cement (Medium Density) is used as an internal wall cladding and tile underlayment
Restrictions on Use:	None known
Section 2. Hazards Identification	
GHS Classification:	Carcinogenity, Category 1A Target Organ Systemic Toxicity Repeated Exposure, Category 1
GHS Label Element(s): Symbol	
Signal Word	DANGER
Hazard Statement(s)	May cause cancer if dust from product is inhaled Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product
Precautionary Statement(s)	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust from product. Wash hands and face thoroughly after handling. Use personal protective equipment as required. If exposed or concerned: Get medical advice. If shortness of breath or other health concerns develop after exposure to dust from the product, seek medical attention. Dispose of product in accordance with local, state and national regulations. If there are no applicable regulations, dispose of in a secure landfill, or in a way that will not expose others to dust.

Section 3. Composition / Information on Ingredients		
CAS#	Chemical Ingredient	%
14808-60-7	Crystalline Silica (Quartz)	15-30%
1333-86-4	Carbon Black	<1%
Section 4. First Aid Measures		
Inhalation	Acute effects – Dust may cause irritation of the nose, throat and airways, resulting in coughing and sneezing. Certain susceptible individuals may experience wheezing (spasms of the bronchial airways) upon inhaling dust during cutting, rebating, drilling, routing, sawing, crushing or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust.	
	Chronic effects – Repeated or prolonged over exposures to crystalline silica can cause silicosis (scarring of the lung) and increases the risk of bronchitis, tuberculosis, lung cancer, renal disease, and scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels, and internal organs.) Some studies suggest that cigarette smoking increases the risk of silicosis, bronchitis and lung cancer in persons also exposed to crystalline silica.	
	Acute silicosis – A sub-chronic disease associated with acute, massive silica exposure, is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include, but are not limited to, shortness of breath, cough, fever, weight-loss and chest pain. Such exposure may cause pneumoconiosis and pulmonary fibrosis.	
	Required treatment – If inhalation of dust occurs, remove to fresh air. If shortness of breath or wheezing develops, seek medical attention.	
Skin	Dust may cause irritation of the skin from friction but cannot be absorbed through intact skin. If skin contact occurs, wash with mild soap and water. Contact physician if irritation persists or later develops.	
Eyes	Dust may irritate the eyes from mechanical abrasion causing watering or redness. If eye contact occurs, remove contact lenses (if applicable). Flush with running water or saline for at least 15 minutes. Seek medical attention if redness persists or if visual changes occur.	
Ingestion	Ingestion is unlikely under normal conditions of use, but swallowing the dust from the product may result in irritation or	

	damage to the mouth and gastrointestinal tract due to alkalinity of dust. If ingestion occurs, dilute by drinking large amounts of water. Do not induce vomiting. Seek medical attention. If unconscious, loosen tight clothing and lay the person on his/her left side. Give nothing by mouth to an individual who is not alert and conscious.
Section 5. Fire-Fighting Measures	
James Hardie® fiber-cement products are neither flammable nor explosive	
Suitable extinguishing techniques:	Appropriate extinguishing techniques for surrounding fire should be used.
Fire-fighting equipment:	Fire fighting personnel should wear normal protective equipment and positive self-contained breathing apparatus.
Special hazards arising from the substance or mixture:	James Hardie ® fiber-cement products are neither flammable nor explosive. Hazardous reactions will not occur under normal conditions. Fight fire with normal precautions from a reasonable distance.
Section 6. Accidental Release Measures	
Emergency procedures:	No special precautions are necessary in the event of an accidental release. The following precautions apply to spills or releases of dust generated during cutting, rebating, drilling, routing, sawing, crushing or otherwise abrading fiber cement.
Protective equipment:	Good housekeeping practices are necessary for cleaning up areas where spills or leaks have occurred. Take measures to either eliminate or minimize the creation of dust. Respirable dust and silica levels should be monitored regularly. Wherever possible, practices likely to generate dust should be controlled with engineering such as local exhaust ventilation, dust suppression through containment (e.g. wetting loose dust), enclosure, or covers. Use respiratory protection as described in Section 8.
Proper methods of containment and clean-up:	NEVER dry sweep as it may generate airborne respirable silica. Instead, wet debris down with a fine mist or sweeping compound to suppress dust during sweeping, or use a vacuum to collect particles. Dispose of product in accordance with local, state and national regulations. If there are no applicable regulations, dispose of in a secure landfill, or in a way that will not expose others to dust.

Section 7. Handling and Storage	
Precautions of safe handling and storage:	Fiber-cement boards in their intact state do not present a health hazard. The controls below apply to dust generated from the boards by cutting, drilling, routing, sawing, crushing or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. James Hardie® recommended best practices for handling fiber-cement: Keep exposure to dust as low as reasonably possible. Respirable crystalline silica limits are specified by OSHA and MSHA and identified in Section 8 of this SDS. Exposure to respirable (fine) silica dust depends on a variety of factors, including activity rate (e.g. cutting rate), method of handling (e.g. electric shears), environmental conditions (e.g. weather conditions, workstation orientation) and control measures used. Practices likely to generate dust should be performed outside if possible, or in a well ventilated area. The work practices and engineering controls set out in Section 8 should be followed to reduce silica exposures. Keep away from reactive products. Do not store near food, beverages or smoking materials. Avoid spilling and creating dust. Maintain appropriate dust controls during handling. Use appropriate respiratory protection during handling as described in Section 8.
Incompatibilities:	Hydrofluoric acid will dissolve silica and can generate silicon tetrafluoride, a corrosive gas. Contact with strong oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride or oxygen difluoride may cause fires and /or explosions. Furthermore, limestone is incompatible with acids and ammonium salts.

Section 8. Exposure Controls / Personal Protection		
OSHA Permissible Exposure Limits (PEL): Exposures shall not exceed an 8-hour time weighted average (TWA) concentration limit as provided in 29 CFR 1910.1000 Table Z-1. The American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) are non-regulatory recommended occupational exposure limits based on an 8-hour TWA exposures.		
	ACGIH TLV	OSHA PEL
Crystalline Silica (Respirable Quartz)	0.025 mg/m^3	0.05 mg/m^3
Nuisance Dust (Not Otherwise Specified) (Total Dust) (Respirable)	 10 mg/m^3(inhalable) 3 mg/m^3	 15 mg/m^3 5 mg/m^3
Carbon Black	3.5 mg/m^3	3.5 mg/m^3
Other limits recommended: The National Institute for Occupational Safety and Health (NIOSH) also has a Recommended Exposure Limit (REL) of 0.05 mg/m^3 for respirable crystalline silica, based on a 10-hour time-weighted average.		
Engineering Controls		
The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, machining, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust you must (1) comply with the OSHA standard for silica dust and/or other applicable law, (2) follow James Hardie cutting instructions to reduce or limit the release of dust; (3) warn others in the immediate work area to avoid breathing the dust; (4) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (5) if no other dust controls are available, wear a dust mask or respirator that meets NIOSH requirements (e.g. N-95 dust mask). During clean-up, use a well maintained vacuum and filter appropriate for capturing fine (respirable) dust or use wet clean-up methods - never dry sweep		
Cutting Outdoors	1. Position cutting station so that wind will blow dust away from user or others in working area and allow for ample dust dissipation 2. Use one of the following methods based on job site conditions and local regulation: BEST • Score and snap using carbide-tipped scoring knife or utility knife • Fiber-cement shears (electric or pneumatic) BETTER • Circular saw equipped with Hardieblade® saw blade and dust collection system GOOD • Circular saw with Hardieblade® saw blade and supplemental ventilation	

Cutting Indoors	• Cut only using score and snap method or with fiber-cement shears (manual, electric or pneumatic) • Position cutting station in well-ventilated area to allow for dust dissipation
Sanding / Grinding / Drilling / Other Machining	If sanding, grinding, drilling or other machining is necessary, you should always wear a NIOSH-approved dust mask or respirator (e.g. N-95) and warn others in the immediate area.
Clean-Up	During clean-up of dust and debris, wet debris down with a fine water mist, apply a dust reducing sweeping compound in sufficient quantities, or use a vacuum to collect dust and debris. NEVER used compressed air or dry sweep without first applying a dust reducing control measure.

Personal Protective Equipment

- **Respiratory –** If respirators are selected, use and maintain in accordance with ANSI Standard (Z88.2) for particulate respirators. Select respirators based on the level of exposure to crystalline silica as measured through exposure monitoring. Use respirators that offer protection to the highest concentrations of crystalline silica if the actual concentrations are unknown. Put in place a respiratory protection and monitoring program that complies with MSHA or OSHA (e.g. 29CFR1910.134) standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit-testing and other requirements. Comply with all other applicable federal and state laws.
- **Eye –** When cutting material, dust resistant safety goggles / glasses should be worn and used in compliance with ANSI Standard Z87.1 and applicable OSHA (e.g. 29CFR1910.133) standards.
- **Skin –** Loose comfortable clothing should be worn. Direct skin contact with dust and debris should be avoided by wearing long sleeved shirts and long trousers, a cap or hat, and gloves. Work clothes should be washed regularly.

Section 9. Physical and Chemical Properties

Appearance and odor: Solid gray boards with varying dimensions according to product. Some product may have a surface coat of water-based acrylic paint or acrylic sealer

Vapor Pressure: Not relevant	Flash Point: Not relevant
Specific Gravity: Not relevant	Autoignition Temperature: Not relevant
Flammability Limits: Not relevant	Volatility: Not relevant
Boiling Point: Not relevant	Solubility in water: Not relevant
Melting Point: Not relevant	Evaporation rate: Not applicable

Section 10. Stability and Reactivity

Stability:	Crystalline silica and fiber cement are stable under ordinary conditions
Conditions to Avoid:	Excessive dust generation when cutting
Materials to Avoid:	Hydrofluoric acid will dissolve silica and can generate silicon tetrafluoride, a corrosive gas. Contact with strong oxidizing agents such

	as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride or oxygen difluoride may cause fires and /or explosions. Furthermore, limestone is incompatible with acids and ammonium salts.
Section 11. Toxicological Information	
Routes of exposure:	Fiber-cement is not toxic in its intact form. The following applies to dust that may be generated during cutting, grinding , drilling, routing, sawing, crushing or otherwise abrading fiber cement.
Related symptoms:	Repeated and prolonged overexposures to dust containing crystalline silica can cause silicosis (scarring of the lung) and increases the risk of bronchitis, tuberculosis, lung cancer, renal disease and scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels and internal organs). Some studies suggest that cigarette smoking increases the risk of silicosis, bronchitis, and lung cancer in persons also exposed to crystalline silica. Acute silicosis is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include, but are not limited to: shortness of breath, cough, fever, weight-loss and chest pain. Such exposure may cause pneumoconiosis and pulmonary fibrosis. The following relates to health effects of cellulose: Based on limited animal research, it is possible that repeated chronic inhalation exposure to cellulose fiber dust over time may lead to inflammation and scarring of the lung in humans. Precautions taken for crystalline silica dust will protect against cellulose. Medical conditions generally aggravated by exposure – Pulmonary function may be reduced by inhalation of respirable crystalline silica and/or cellulose. If lung scarring occurs, such scarring could aggravate other lung conditions such as asthma, emphysema, pneumonia or restrictive lung diseases. Lung scarring from crystalline silica may also increase risks to pulmonary tuberculosis. Smoking – some studies suggest that cigarette smoking increases the risk of occupational respiratory diseases, including silica-related respiratory diseases.
Acute and chronic effects:	• Acute toxicity – not classified • Skin corrosion / irritation – not classified • Serious eye damage / irritation – not classified • Respiratory or skin sensitization – not classified • Germ cell mutagenicity – not classified • Carcinogenicity – may cause cancer if dust from product is inhaled

	• Specific target organ toxicity (repeated exposure) – causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product
Carcinogenicity:	California Proposition 65 Warning: WARNING: This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. International Agency for Research on Cancer (IARC): Crystalline silica inhaled in the forms of quartz or cristobalite from occupational sources is carcinogenic to humans Carbon black is possibly carcinogenic to humans The National Toxicology Program (NTP): NTP has concluded that respirable crystalline silica is a known human carcinogen LD50 (Silicon dioxide): Rat oral >22,500 mg / kg Mouse oral > 10,500 mg/kg

Section 12. Ecological Information
There is a very limited amount of ecological data available on the effects of releases that may occur from this product being released into the environment. Clean up of the spilled product would not be expected to leave any hazardous material that could cause a significant adverse impact. There is a limited amount of ecological data available on crystalline silica, primarily because it is a naturally occurring mineral. An adequate representation of these data is beyond the scope of this document.
Section 13. Disposal Considerations
Dispose of material as inert, non-metallic mineral in conformance with local, state and federal regulations. Fiber cement and crystalline silica are not RCRA hazardous wastes.
Section 14. Transport Information
There are no special requirements for storage and transport

UN No:	None allocated
Dangerous goods class:	None allocated
Hazchem code:	None allocated
Poisons schedule:	None allocated
Packing group:	Not applicable
Label:	Not a DOT hazardous material. Local regulations may apply

Section 15. Regulatory Information	
DOT hazard classification:	None

Placard requirement:	Not a DOT hazardous material. Local placarding regulations may apply
California Proposition 65:	WARNING: This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information
CERCLA hazardous substance (40CFR Part 302):	Listed substance: No Unlisted substance: No Reportable quantity (RQ): None Characteristic(s): Not applicable RCRA waste number: Not applicable
SARA. Title III. Sections 302 / 303 (40CFR part 355 – Emergency Planning and Notification):	Extremely hazardous substance: No
SARA. Title III. Section 311 / 312 (40CFR part 370 – Hazardous Chemical Reporting: Community Right-To-Know):	Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: No
SARA. Title III. Section 313 (40CFR part 372 – Toxic Chemical Release Reporting: Community Right-To-Know	Not a RCRA hazardous waste
TSCA Inventory List:	Yes
TSCA 8(d):	No
Section 16. Other Information	
Prepared by Lou Hoffman	Issue Date: 08/12/2020

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