

1. Product and Company Identification

Material name FireDefender® FS II
Product use Fire-rated wood veneered door frames.
Product List See Product List found in Section 16
Manufacturer information Georgia-Pacific Gypsum LLC
 133 Peachtree Street, NE
 Atlanta, GA 30303
 MSDS Request 404.652.5119
 Technical Information 800.225.6119
 Chemtrec - Emergency 800.424.9300

2. Hazards Identification

Emergency overview CAUTION!
 Sawing, sanding, drilling, or routing this product may generate dust. Dust can be irritating to the eyes, skin, and respiratory system.

Potential health effects

- Eyes** Dust may cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Skin** Dust may produce itching, rash, and redness. Handling can cause dry skin.
- Inhalation** Dust may cause respiratory tract irritation.
- Ingestion** Not applicable under normal conditions of use. May result in obstruction or temporary irritation of the digestive tract.

3. Composition / Information on Ingredients

Components	CAS #	Percent/Wt
GYPSUM (CALCIUM SULFATE)	7778-18-9	60 - 100
CELLULOSE	9004-34-6	7 - 13
PERLITE*	93763-70-3	5 - 10
VERMICULITE (NON-ASBESTOS CONTAINING)*	1318-00-9	1 - 5
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	1 - 5
CONTINUOUS FILAMENT GLASS FIBERS	65997-17-3	1 - 5
WOOD/WOOD DUST	Not Assigned	0 - 0.1

Composition comments

* - Contained only in low density FireDefender® formulas.

Gypsum (calcium sulfate), perlite, and vermiculite contain naturally occurring crystalline silica (quartz) which is listed as a lung carcinogen. Wood dust, a by-product generated from sawing, sanding, drilling, or routing the wood veneered door frames, may be hazardous. See section 8 for exposure information.

The weight percent for crystalline silica represents total crystalline silica and not the respirable fraction. Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.

Skin contact For skin contact, wash immediately with soap and water. Get medical attention if irritation develops or persists.

Inhalation Remove to fresh air. If symptoms persist, obtain medical attention.

Ingestion

May result in obstruction and irritation if ingested. Get medical attention.

5. Fire Fighting Measures

Flammable properties

Not flammable by OSHA/WHMIS criteria.

Extinguishing media**Suitable extinguishing media**

Not applicable.

Protection of firefighters**Protective equipment and precautions for firefighters**

Firefighters should wear full protective clothing including self contained breathing apparatus.

Explosion data**Sensitivity to static discharge**

Not applicable.

Sensitivity to mechanical impact

Not applicable.

Hazardous combustion products

May include, and are not limited to: calcium oxide and sulfur dioxide.

6. Accidental Release Measures

Personal precautions

Use personal protection recommended in Section 8. Keep unnecessary personnel away from the release.

Environmental precautions

Keep out of drains, sewers, ditches, and waterways.

Methods for containment

Pick up large pieces, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use personal protection recommended in Section 8.

Methods for cleaning up

Vacuum or sweep up material and place in a disposal container.

7. Handling and Storage

Handling

Avoid contact with skin and eyes. Do not breathe dust. Use only in well-ventilated areas. Handle with care. Do not eat or drink while using the product. Wash hands before eating, drinking, or smoking.

Storage

Keep away from children. Store level and keep dry.

8. Exposure Controls / Personal Protection

GYPSUM (CALCIUM SULFATE) (CAS # 7778-18-9)

	TWA	STEL	Ceiling
ACGIH	10 mg/m ³ TWA (inhalable fraction)	Not established	Not established
OSHA	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	Not established	Not established

CELLULOSE (CAS # 9004-34-6)

	TWA	STEL	Ceiling
ACGIH	10 mg/m ³ TWA	Not established	Not established
OSHA	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	Not established	Not established

PERLITE* (CAS # 93763-70-3)

	TWA	STEL	Ceiling
ACGIH	10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)	Not established	Not established
OSHA	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	Not established	Not established

CONTINUOUS FILAMENT GLASS FIBERS (CAS # 65997-17-3)

	TWA	STEL	Ceiling
ACGIH	1 fiber/cm ³ TWA (respirable fibers, length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination); 5 mg/m ³ TWA (inhalable fraction)	Not established	Not established
OSHA	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	Not established	Not established

VERMICULITE (NON-ASBESTOS CONTAINING)* (CAS # 1318-00-9)

	TWA	STEL	Ceiling
ACGIH	10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)	Not established	Not established
OSHA	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	Not established	Not established

WOOD/WOOD DUST (CAS # Not Assigned)

	TWA	STEL	Ceiling
ACGIH	1 mg/m3 TWA (Inhalable)	Not established	Not established
OSHA	5 mg/m3 TWA (Total Dust) (Vacated)	10 mg/m3 (Vacated)	Not established

CRYSTALLINE SILICA (QUARTZ) (CAS # 14808-60-7)

	TWA	STEL	Ceiling
ACGIH	0.025 mg/m3 TWA (respirable fraction)	Not established	Not established
OSHA	((10)/(%SiO ₂ + 2) mg/m3 TWA (respirable)); ((30)/(%SiO ₂ + 2) mg/m3 TWA (total dust)); ((250)/(%SiO ₂ + 5) mppcf TWA (respirable))	Not established	Not established

Exposure guidelines	Georgia-Pacific LLC voluntarily elects to adhere to the wood dust exposure limits contained in OSHA's 1989 Air Contaminants Standard although certain limits were vacated in 1992. The present OSHA exposure limits governing wood dust is 15 mg/m3 (Total Dust) and 5 mg/m3 (Respirable Fraction).
Engineering controls	When sawing, sanding, drilling, or routing this product, provide local and general exhaust ventilation to keep airborne dust concentrations below exposure limits. Use wet methods, if appropriate, to reduce generation of dust.
Personal protective equipment	
Eye / face protection	Ensure compliance with OSHA's PPE standard (29 CFR 1910.132 and .133) for eye and face protection. Safety glasses or goggles are recommended when using this product. Safety shower/eye wash fountain must be readily available in the workplace area (29 CFR 1910.151(c)).
Skin protection	Impervious protective clothing and gloves recommended to prevent drying or irritation of skin. Ensure compliance with OSHA's PPE standards (29 CFR 1910.132 (general) and 138 (hand protection)). Safety shower/eye wash fountain is recommended in the workplace area (29 CFR 1910.151 (c)).
Respiratory protection	A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2)

9. Physical & Chemical Properties

Color	Grey or Brown
Odor	Odorless
pH	6.5 - 8.5
Freezing point	Not applicable
Boiling point	Not applicable
Flash point	Not applicable
Flammability	Not Flammable
Flammability limits in air, upper, % by volume	Not applicable
Flammability limits in air, lower, % by volume	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Specific gravity	1 - 1.5
Solubility (water)	<0.2 at 22°C
Auto-ignition temperature	Not applicable
VOC	Not available
Percent volatile	Not available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions of Reactivity	None known.
Incompatible materials	None known.
Hazardous decomposition products	May include and are not limited to: calcium oxide and sulfur dioxide.

11. Toxicological Information

Toxicological information (Ingredients)

GYPSUM (CALCIUM SULFATE) (CAS # 7778-18-9)

Toxicology Data - Selected LD50s and LC50s

Oral LD50 Mouse: 5824 mg/kg

Oral LD50 Rat: 3000 mg/kg

CELLULOSE (CAS # 9004-34-6)

Toxicology Data - Selected LD50s and LC50s

Oral LD50 Rat: 5000 mg/kg

Dermal LD50 Rabbit: 2000 mg/kg

Inhalation LC50 Rat: 5800 mg/l/4h

CRYSTALLINE SILICA (QUARTZ) (CAS # 14808-60-7)

Toxicology Data - Selected LD50s and LC50s

Oral LD50 Rat: 500 mg/kg

Sensitization

Not expected to be hazardous by OSHA/WHMIS criteria.

Acute effects

In 1987, IARC classified continuous filament glass fibers as a Group 3 substance, "not classifiable as to its carcinogenicity to humans." In 2001, IARC reaffirmed this designation. Continuous filament glass fibers are not considered respirable due to their large diameter.

Chronic effects

Hazardous by OSHA/WHMIS criteria.

Exposure to respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by IARC and NTP as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to a respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of respirable crystalline silica exposure and the length of time (usually years) of exposure.

The weight percent for crystalline silica represents total crystalline silica and not the respirable fraction. Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

Wood dust generated from sawing, sanding or machining this product may cause nasal dryness, irritation, coughing and sinusitis. The International Agency for Research on Cancer (IARC), and National Toxicology Program (NTP) classifies wood dust as a carcinogen. This classification is based on the increased occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation noted insufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon, or rectum with exposure to wood dust.

Carcinogenicity

Hazardous by OSHA/WHMIS criteria.

CRYSTALLINE SILICA (QUARTZ) (CAS # 14808-60-7)

ACGIH - Threshold Limit Values - Carcinogens

IARC - Group 1 (Carcinogenic to Humans)

A2 - Suspected Human Carcinogen

Monograph 68 [1997] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources)

Known Human Carcinogen

NTP (National Toxicology Program) - Report on Carcinogens - Known Human Carcinogens

U.S. - OSHA - Hazard Communication Carcinogens

Present

WOOD/WOOD DUST (CAS # Not Assigned)

IARC - Group 1 (Carcinogenic to Humans)

Monograph 62 [1995]

NTP (National Toxicology Program) - Report on Carcinogens - Known Human Carcinogens

Known Human Carcinogen

U.S. - OSHA - Hazard Communication Carcinogens

Present

Mutagenicity

Not expected to be hazardous by OSHA/WHMIS criteria.

Reproductive effects

Not expected to be hazardous by OSHA/WHMIS criteria.

Teratogenicity

Not expected to be hazardous by OSHA/WHMIS criteria.

Synergistic materials

Not available.

12. Ecological Information

Ecotoxicity Not considered to be harmful to aquatic life.

GYP SUM (CALCIUM SULFATE) (CAS # 7778-18-9)

Ecotoxicity - Freshwater Fish Species Data

96 Hr LC50 *Lepomis macrochirus*: 2980 mg/L [static]; 96 Hr
LC50 *Pimephales promelas*: >1970 mg/L [static]

13. Disposal Considerations

Disposal instructions This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

14. Transport Information

Department of Transportation (DOT) Requirements

This product is not regulated as a hazardous material by the United States (DOT) transportation regulations.

Canadian Transportation of Dangerous Goods (TDG) Requirements

Not regulated as dangerous goods.

15. Regulatory Information

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 313 hazardous chemical No

Canadian regulations

CRYSTALLINE SILICA (QUARTZ) (CAS # 14808-60-7)

Canada - WHMIS - Ingredient Disclosure List

1 %

16. Other Information

Product list

FireDefender® FS II

(Includes HDF and LDF)

HMIS® ratings

Health: 1*
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 0
Instability: 0

Other information

Products on this MSDS do not contain asbestos.

Disclaimer

The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Georgia-Pacific and its subsidiaries make no warranty of any kind, expressed or implied, concerning the accuracy or completeness of the information and data herein. The implied warranties of merchantability and fitness for a particular purpose are specifically excluded. Georgia-Pacific and its subsidiaries 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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