

# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>FireDefender® FS (HDF)</b>
<b>Product list</b>	FireDefender® FS (HDF) MO-003
<b>Other means of identification</b>	
<b>SDS number</b>	GP-73A
<b>Product code</b>	GP-73A
<b>Recommended use</b>	Edge banding, blocking, mineral core and components for fire doors and frames
<b>Recommended restrictions</b>	Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

### Manufacturer/Importer/Supplier/Distributor information

<b>Company name</b>	Georgia-Pacific Gypsum LLC		
<b>Address</b>	133 Peachtree Street, NE Atlanta, GA 30303		
<b>Telephone</b>	Technical Information	800.225.6119	
	(M)SDS Request	404.652.5119	
<b>E-mail</b>	Not available.		
<b>Emergency phone number</b>	Chemtrec - Emergency	800.424.9300	

## 2. Hazard(s) identification

Emergency overview	This product is not hazardous in the form in which it is shipped by the manufacturer but may become hazardous by downstream activities such as cutting, sanding, or otherwise working with this product that generate large amount of dusts. Those hazards associated with large amount of dusts are described below.	
Physical hazards	Not classified.	
Health hazards	Serious eye damage/eye irritation	Category 2B
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		
Hazard symbol	None.	
Signal word	Warning	
Hazard statement	Causes eye irritation.	
Precautionary statement		
Prevention	Observe good industrial hygiene practices. Wash thoroughly after handling.	
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.	
Storage	Store away from strong acids.	
Disposal	Dispose of waste and residues in accordance with local authority requirements.	
Hazard(s) not otherwise classified (HNOC)	None known.	
Supplemental information	None.	

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
CALCIUM SULFATE DIHYDRATE		10101-41-4	60 - 100
CELLULOSE		9004-34-6	5 - 10

Chemical name	Common name and synonyms	CAS number	%
CONTINUOUS FILAMENT GLASS FIBERS		65997-17-3	1 - 5
CRYSTALLINE SILICA (QUARTZ)*		14808-60-7	1 - 5
VERMICULITE		1318-00-9	1 - 5
Other components below reportable levels			1 - 5

**Composition comments** Gypsum (calcium sulfate, dihydrate) and vermiculite contain naturally occurring crystalline silica (quartz) which is listed as a lung carcinogen. 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

<b>Inhalation</b>	Remove to fresh air. If symptoms persist, obtain medical attention.
<b>Skin contact</b>	Wash with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Do not rub the eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Rinse mouth. May result in obstruction and irritation if ingested. Get medical attention.
<b>Most important symptoms/effects, acute and delayed</b>	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Use personal protection recommended in Section 8. Keep unnecessary personnel away. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
<b>Methods and materials for containment and cleaning up</b>	Sweep up or gather material and place in an appropriate container for disposal. Minimize dust generation. Utilize wet methods, if appropriate, to minimize dust. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Keep out of drains, sewers, ditches, and waterways.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Provide appropriate exhaust ventilation at places where dust is formed. Minimize dust generation and accumulation. Do not breathe dust. Do not get this material in contact with eyes. Do not taste or swallow. Avoid prolonged exposure. Observe good industrial hygiene practices. Use only in well-ventilated areas. Wear appropriate NIOSH approved dust mask or filtering facepiece if dust is generated. Do not eat or drink while using the product. Wash hands before eating, drinking, or smoking.
--------------------------------------	---

**Conditions for safe storage, including any incompatibilities**

Store level and keep dry. Dewpoint or other conditions causing the presence of moisture can damage the product during storage. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits****US OSHA Table Z-3: Calculated Time Weighted Average (TWA) (mg/m3)**

Components	Type	Value	Form
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	4.3 mg/m3	Total dust.
		1.4 mg/m3	Respirable.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
CELLULOSE (CAS 9004-34-6)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
VERMICULITE (CAS 1318-00-9)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

**US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3, non-standard units**

Components	Type	Value	Form
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)	TWA	10 mg/m3	Inhalable fraction.
CELLULOSE (CAS 9004-34-6)	TWA	10 mg/m3	
CONTINUOUS FILAMENT GLASS FIBERS (CAS 65997-17-3)	TWA	1 fibers/cm3	Fiber.
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
CELLULOSE (CAS 9004-34-6)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
CONTINUOUS FILAMENT GLASS FIBERS (CAS 65997-17-3)	TWA	5 mg/m3	Fiber, total
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Exposure guidelines**

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Exposure limits for CRYSTALLINE SILICA - The US OSHA exposure limits 8 hour TWA for CRYSTALLINE SILICA (QUARTZ) are calculated from the following equations:  $30/(\%SiO_2+2)$  mg/m3 for total dust; and  $10/(\%SiO_2+2)$  mg/m3 for 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.

<b>Appropriate engineering controls</b>	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.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Safety glasses or goggles are recommended when using this product. Ensure compliance with OSHA's PPE standard (29 CFR 1910.132 and .133) for eye and face protection.
<b>Skin protection</b>	
<b>Hand protection</b>	For prolonged or repeated skin contact use suitable protective gloves.
<b>Other</b>	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)).
<b>Respiratory protection</b>	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).
<b>Thermal hazards</b>	Not applicable.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

<b>Appearance</b>	Composite edge banding, blocking or components
<b>Physical state</b>	Solid.
<b>Form</b>	Solid
<b>Color</b>	Grey or Brown
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	2642 °F (1450 °C) estimated
<b>Initial boiling point and boiling range</b>	Not applicable
<b>Flash point</b>	Not applicable
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable
<b>Flammability limit - upper (%)</b>	Not applicable
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not applicable
<b>Vapor density</b>	Not applicable
<b>Relative density</b>	Not available
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	<0.2 at 22°C
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not applicable
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Flash point class</b>	Not flammable

Percent volatile	Not available
Specific gravity	1 - 1.5
VOC (Weight %)	Not available

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
<b>Incompatible materials</b>	Acids.
<b>Hazardous decomposition products</b>	May include and are not limited to: calcium oxide and sulfur dioxide.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Inhalation of dusts may cause respiratory irritation.
<b>Skin contact</b>	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
<b>Eye contact</b>	Dust in the eyes will cause irritation.
<b>Ingestion</b>	Not applicable under normal conditions of use. May cause gastrointestinal irritation if ingested.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	In its purchased form, the product is not hazardous. Dust generated during processing may cause eye and respiratory irritation. Exposed individuals may experience eye tearing, redness, and discomfort. Coughing and difficulty breathing.
---	---

### Information on toxicological effects

#### Acute toxicity

Product	Species	Test Results
FireDefender® FS (HDF)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	20435 mg/kg
<b>Inhalation</b>		
LC50	Rat	59258 mg/l/4h
<b>Oral</b>		
LD50	Rat	3585 mg/kg

Components	Species	Test Results
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Rat	> 1581 mg/kg

<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
----------------------------------	--

<b>Serious eye damage/eye irritation</b>	Dust in the eyes will cause irritation.
--	---

#### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Not likely to cause respiratory sensitization.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.

<b>Germ cell mutagenicity</b>	Not classified.
-------------------------------	-----------------

**Carcinogenicity**

Not expected to be hazardous by OSHA 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.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

CRYSTALLINE SILICA (QUARTZ)\* (CAS 14808-60-7) 1 Carcinogenic to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**US. National Toxicology Program (NTP) Report on Carcinogens**

CRYSTALLINE SILICA (QUARTZ)\* (CAS 14808-60-7) Known To Be Human Carcinogen.

**Reproductive toxicity** Not classified.**Specific target organ toxicity - single exposure** Not classified.**Specific target organ toxicity - repeated exposure** Not classified.**Aspiration hazard** Not classified.**Chronic effects** Not hazardous under normal conditions of use.

**Further information** \*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.

**12. Ecological information****Ecotoxicity** Not considered to be harmful to aquatic life.

Product		Species	Test Results
FireDefender® FS (HDF)			
<b>Aquatic</b>			
Fish	LC50	Fish	3810 mg/L, 96 Hours
<i>Acute</i>			
Fish	LC50	Fish	2278.7434 mg/l, 96 hours estimated
Components		Species	Test Results
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)			
<b>Aquatic</b>			
<i>Acute</i>			
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	> 1970 mg/l, 96 hours
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)			
<b>Aquatic</b>			
<i>Acute</i>			
Fish	LC50	Zebra danio ( <i>Danio rerio</i> )	> 10000 mg/l, 96 Hours OECD SIDS

**Persistence and degradability** No data is available on the degradability of this product.**Bioaccumulative potential** No data available.**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

**Disposal instructions** 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. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**      Dispose of in accordance with local regulations.

**Contaminated packaging**      Not available.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**      Not applicable.

## 15. Regulatory information

**US federal regulations**      This product is not hazardous in the form in which it is sold and shipped by the manufacturer. However, the large amount of dusts generated by downstream activities such as cutting, sanding, or otherwise working with this product is considered hazardous and is regulated under the Hazard Communication Standard 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical**      Yes

**SARA 313 (TRI reporting)**  
Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)**      Not regulated.

### US state regulations

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**  
Not listed.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

CRYSTALLINE SILICA (QUARTZ)\* (CAS 14808-60-7)

#### US. Massachusetts RTK - Substance List

CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)

CELLULOSE (CAS 9004-34-6)

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

CRYSTALLINE SILICA (QUARTZ)\* (CAS 14808-60-7)

**US. New Jersey Worker and Community Right-to-Know Act**

CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)  
CELLULOSE (CAS 9004-34-6)  
CONTINUOUS FILAMENT GLASS FIBERS (CAS 65997-17-3)  
CRYSTALLINE SILICA (QUARTZ)\* (CAS 14808-60-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)  
CELLULOSE (CAS 9004-34-6)  
CONTINUOUS FILAMENT GLASS FIBERS (CAS 65997-17-3)  
CRYSTALLINE SILICA (QUARTZ)\* (CAS 14808-60-7)

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

<b>Issue date</b>	April-18-2015
<b>Version #</b>	01
<b>HMIS® ratings</b>	Health: 1 Flammability: 0 Physical hazard: 0
<b>NFPA ratings</b>	Health: 1 Flammability: 0 Instability: 0
<b>Disclaimer</b>	<p>This SDS is intended to quickly provide useful information to the user(s) of this material or product. It is not intended to serve as a comprehensive discussion of all possible risks or hazards, and it assumes a reasonable use of the product. The information contained in this SDS is believed to be accurate as of the date of preparation of this SDS and has been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. The user or handler (or their employer) should consider the specific conditions in which this material will be used, handled, or stored and determine what specific safety or other precautions are required. Employers should ensure that their employees, agents, contractors, and customers who will use the product receive adequate warnings and safe handling procedures, including a current SDS. Product users or handlers (or their employer) who are unsure of what specific precautions are required should consult their employer, product supplier, or safety or health professionals before handling or working with this product. Please notify us immediately if you believe this SDS or other safety and health information about this product is inaccurate or incomplete.</p>
<b>Revision Information</b>	<p>Product and Company Identification: Synonyms Composition / Information on Ingredients: Ingredients Physical &amp; Chemical Properties: Multiple Properties HazReg Data: International Inventories GHS: Classification</p>