

SAFETY DATA SHEET

1. Identification

Product identifier	FireDefender® FS (HDF)
Product list	FireDefender® FS (HDF) MO-003
Other means of identification	
SDS number	GP-73A
Recommended use	Edge banding, blocking, mineral core and components for fire doors and frames
Recommended restrictions	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

Company name	Georgia-Pacific Gypsum LLC		
Address	133 Peachtree Street, NE Atlanta, GA 30303		
Telephone	Technical Information	800.225.6119	
	(M)SDS Request	404.652.5119	
E-mail	MSDSREQ@GAPAC.COM		
Emergency phone number	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	Eye irritation	Category 2B	
	Carcinogenicity	Category 1A	
	Specific target organ toxicity, repeated exposure	Category 1 (lung)	
Environmental hazards	Not classified.		
OSHA defined hazards	Not classified.		
Label elements			



Signal word	Danger		
Hazard statement	Causes eye irritation. May cause cancer. Causes damage to organs (lung) through prolonged or repeated exposure.		
Precautionary statement			
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.		
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. If exposed or concerned: Get medical advice/attention. Specific treatment (see section 4 on the SDS).		
Storage	Store away from incompatible materials (see Section 10 of the SDS).		
Disposal	Dispose of contents/container in accordance with applicable regulations.		
Hazard(s) not otherwise classified (HNOC)	None known.		

3. Composition/information on ingredients**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
CALCIUM SULFATE DIHYDRATE		10101-41-4	85 - 100
CELLULOSE		9004-34-6	5 - 10
CONTINUOUS FILAMENT GLASS FIBERS		65997-17-3	1 - 5
CRYSTALLINE SILICA (QUARTZ)		14808-60-7	1 - 5
VERMICULITE		1318-00-9	1 - 5

The specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Causes eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort. Dusts may irritate the respiratory tract, skin and eyes. Coughing. Discomfort in the chest. Shortness of breath. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

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

6. Accidental release measures

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

7. Handling and storage

Precautions for safe handling

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/MSHA 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: Time Weighted Average (TWA) (mg/m3)

Components	Type	Value	Form
VERMICULITE (CAS 1318-00-9)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

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.
CRYSTALLINE SILICA (QUARTZ) (CAS 14808-60-7)	PEL	0.05 mg/m3	

ACGIH

Components	Type	Value	Form
CONTINUOUS FILAMENT GLASS FIBERS (CAS 65997-17-3)	TWA	5 mg/m3	Inhalable fraction.

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

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
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.		
Appropriate engineering controls	When sawing, sanding, drilling, or routing this product, provide local and general exhaust ventilation to keep airborne dust concentrations below exposure limits.		
Individual protection measures, such as personal protective equipment			
Eye/face protection	Wear safety glasses with side shields (or goggles). Ensure compliance with OSHA's PPE standard (29 CFR 1910.132 and .133) for eye and face protection. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.		
Skin protection			
Hand protection	For prolonged or repeated skin contact use suitable protective gloves.		
Other	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).		
Thermal hazards	Not applicable.		
General hygiene considerations	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. Keep away from food and drink.		

9. Physical and chemical properties

Appearance	Composite edge banding, blocking or components
Physical state	Solid.
Form	Solid
Color	Grey or Brown
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	2642 °F (1450 °C) estimated
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable
Flammability limit - upper (%)	Not applicable
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	Not available

Solubility(ies)	
Solubility (water)	<0.2 at 22°C
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Flash point class	Not flammable
Oxidizing properties	Not oxidizing.
Percent volatile	Not available
Specific gravity	1 - 1.5
VOC	Not available

10. Stability and reactivity

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

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. Dust may irritate respiratory system.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Causes eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Causes eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort. Dusts may irritate the respiratory tract, skin and eyes. Coughing. Discomfort in the chest. Shortness of breath.

Information on toxicological effects

Acute toxicity

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

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

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 regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

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

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

Not classified.

Specific target organ toxicity - repeated exposure

Causes damage to organs (lung) through prolonged or repeated exposure.

Aspiration hazard

Not an aspiration hazard.

Chronic effects

Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

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

* Estimates for product may be based on additional component data not shown.

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 regulated.

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

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

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

US. California Proposition 65

WARNING: This product can expose you to chemicals including Crystalline Silica (Quartz), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

CRYSTALLINE SILICA (QUARTZ) (CAS 14808-60-7) Listed: October 1, 1988

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

Issue date	April-18-2015
Revision date	May-17-2017
Version #	03
HMIS® ratings	Health: 2* Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 0 Instability: 0
Disclaimer	<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>
Revision information	This document has undergone significant changes and should be reviewed in its entirety.