SAFETY DATA SHEET

1. Identification

Product identifier: FireDefender® Expanded Perlite

Other means of identification: None.

Recommended use: Material Filler

Recommended restrictions: None known.

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

Physical hazards: Not classified.

Health hazards:
- Eye irritation: Category 2B
- Carcinogenicity: Category 1A
- Specific target organ toxicity, single exposure
- Specific target organ toxicity, repeated exposure: Category 3 respiratory tract irritation

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Causes eye irritation. May cause respiratory 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. Use only outdoors or in a well-ventilated area. 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 inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If exposed or concerned: Get medical advice/attention. Specific treatment (see section 4 on the SDS).

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. 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.

Supplemental information: None.

3. Composition/information on ingredients

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

4. First-aid measures

**Inhalation**
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**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**
Exposed individuals may experience eye tearing, redness, and discomfort. Dusts may irritate the respiratory tract, skin and eyes. Causes eye irritation. Coughing. Discomfort in the chest. Shortness of breath. Prolonged exposure may cause chronic effects.

The most important symptoms/effects, acute and delayed
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**
Use water spray to cool unopened containers.

**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**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**
Large Spills: Sweep up or gather material and place in appropriate container for disposal. Minimize dust generation and accumulation. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Contain the spill, then place in a suitable container. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewer, basements or confined areas.

**Environmental precautions**
Avoid discharge into drains, water courses or onto the ground. If large quantities enter a waterway, advise local authorities.

7. Handling and storage

**Precautions for safe handling**
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid contact with eyes. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**
Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRYSALLINE SILICA (QUARTZ) (CAS 14808-60-7)</td>
<td>PEL</td>
<td>0.05 mg/m3</td>
<td>Respirable dust.</td>
</tr>
</tbody>
</table>

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</thead>
<tbody>
<tr>
<td>CRYSALLINE SILICA (QUARTZ) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.025 mg/m3</td>
<td>Respirable fraction.</td>
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</table>

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<tbody>
<tr>
<td>CRYSALLINE SILICA (QUARTZ) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.05 mg/m3</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td>EXPANDED PERLITE (CAS 93763-70-3)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Respirable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m3</td>
<td>Total</td>
</tr>
</tbody>
</table>

### 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 using product, provide local and general exhaust ventilation to keep airborne dust concentrations below exposure limits. Use wet methods, if appropriate, to reduce the generation of dust.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

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. Safety shower/eye wash fountain must be readily available in the workplace area (29 CFR 1910.151(c)).

#### Skin protection

**Hand protection**

Wear appropriate chemical resistant 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

Wear appropriate thermal protective clothing, when necessary.

#### General hygiene considerations

Keep away from food and drink. 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

### Appearance

- **Physical state**
  - Solid.
- **Form**
  - Powder.
- **Color**
  - White to off-white
- **Odor**
  - Odorless.
- **Odor threshold**
  - Not available.
- **pH**
  - Not available.
- **Melting point/freezing point**
  - 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 oxides of silica, aluminium, sodium and potassium.

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**: Not applicable under normal conditions of use. May cause gastrointestinal irritation if ingested.

Symptoms related to the physical, chemical and toxicological characteristics | Causes eye irritation. Irritation of eyes. 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**
EXPANDED PERLITE (CAS 93763-70-3)

Acute
Oral
LD50    Mouse    12960 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 1910.1001-1052)
CRYSTALLINE SILICA (QUARTZ) (CAS 14808-60-7) Cancer
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  May cause respiratory irritation.
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
CRYSTALLINE SILICA (QUARTZ) (CAS 14808-60-7)

Aquatic
Acute
Fish    LC50    Zebrafish (Danio rerio)    > 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.
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. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 a "Hazardous Chemical" as defined by the OSHA 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 1910.1001-1052)

CRYSSTALLINE SILICA (QUARTZ) (CAS 14808-60-7) Cancer

lung effects

immune system effects

kidney effects

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Serious eye damage or eye irritation

Carcinogenicity

Specific target organ toxicity (single or repeated exposure)

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

California Proposition 65

WARNING: This product can expose you to CRYSSTALLINE SILICA (QUARTZ), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.
California Proposition 65 - CRT: Listed date/Carcinogenic substance
CRYSTALLINE SILICA (QUARTZ) (CAS 14808-60-7) Listed: October 1, 1988

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)

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*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: October-16-2015
Revision date: November-05-2018
Version #: 04

HMIS® ratings
Health: 3*
Flammability: 0
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 0
Instability: 0

Disclaimer
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.

Revision information
Regulatory information: California Proposition 65
Regulatory information: US federal regulations