



# Material Safety Data Sheet

Calcium Sulphate FG

Rev. January 1, 2011

## 1. Product Information

**Calcium Sulfate Feed Grade**

**Synonym:** Gypsum

**Chemical Family:** Gypsum (calcium sulfate dihydrate,  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ )

Distributed by Pestell Minerals & Ingredients, New Hamburg, ON Canada

24 Hour Emergency Telephone (Canutec): 613-996-6666

## 2. Information on Ingredients

**Gypsum:** 100% CAS No. 13397-24-5 10mg/m<sup>3</sup> TLV, 15(T)/5(R) mg/m<sup>3</sup> PEL

**Calcium Sulfate Dihydrate:** CAS No. 10101-41-4

**Silica-crystalline, respirable:** CAS No. 14808-60-7 <1, TLV 0.5 (R), PEL 0.1 (R)

(T): Total (R): Respirable

## 3. Hazards Identification

**Target Organs:** Eyes, skin and respiratory system.

**Primary Routes of Entry:** Inhalation, eyes and skin contact

### Emergency Overview

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat or upper respiratory tract.

Information for Handling and Identification of Chemical Hazards

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0 Other: N/A

HMIS Ratings: Health: 0 Fire: 0 Reactivity: 0

Personal Protection: Use eye and skin protection

Use NIOSH/MSHA approved respiratory protection when necessary

Respirable crystalline silica can cause lung disease and/or cancer.

0 = Minimal Hazard 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**Emergency Overview:** This product is not expected to produce any unusual hazards during normal use.

Exposure to high dust levels may irritate the skin, eyes, nose, throat or upper respiratory tract.

### Potential Health Effects

**Acute/Eyes:** Airborne dust or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.

**Acute/Skin:** Direct, prolonged or repeated contact with the skin may cause irritation.

**Acute/Inhalation:** Dust exposures generated during the handling of the product may irritate eyes, skin, nose, throat and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Laboured breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.

**Acute/Ingestion:** If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.

**Chronic/Eyes:** None known

**Chronic/Skin:** None known

**Chronic/Ingestion:** No known effects

**Chronic/Inhalation:** Testing of dust from USG gypsum powders has not detected respirable crystalline silica. Exposures to respirable crystalline silica are not expected during the normal use of this product, however, actual levels must be determined by workplace hygiene testing.

Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e. silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

## 4. First Aid Measures

### First Aid Procedures

**Eyes:** In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult physician.

**Skin:** Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin area. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult a physician.

**Inhalation:** Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however, if conditions warrant, contact physician.

**Ingestion:** This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbances occurs, call physician.

**Medical Conditions which May Be Aggravated:** Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

## 5. Fire Fighting Measures

**General Fire Hazards:** Not expected to burn

**Extinguishing Media:** Water or use extinguishing media appropriate for surrounding fire

**Special Fire Fighting Procedures:** Wear appropriate personal protective equipment

**Unusual Fire and Explosion Hazards:** None

**Hazardous Combustion Products:** Above 1450°C - Decomposes to calcium oxide (CaO) and sulfur dioxide (SO<sub>2</sub>)

## 6. Accidental Release Measures

### Containment

No special precautions. Wear appropriate personal protection.

Clean UP: Use normal cleanup procedures. Wear appropriate protective equipment. Ventilate area. If dry, shovel or sweep up material from spillage and place collected material into a container or waste disposal. Avoid dust generation. Avoid inhalation of dust and contact with eyes and skin. Maintain proper ventilation. If vacuum is used to collect dust, use an industrial vacuum cleaner with a high efficiency air filter. If sweeping is necessary, use dust suppressant. Do not use compressed air for clean up. These procedures will help minimize potential exposures. If washed down, may plug drains.

Disposal: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into

sewers or surface waters. Trace amounts of residue can be flushed to a drain, using plenty of water.

## 7. Handling and Storage

**Handling:** Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded. Avoid dust contact with eyes. Wear the appropriate eye protection against dust. Use good safety and industrial hygiene practices.

**Storage:** Store at room temperature in a dry location. Keep containers closed when not in use.

## 8. Exposure Controls/Personal Protection

### Engineering Controls:

Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica. If user operation generates airborne dust, use ventilation to keep dust concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits. If engineering controls are not possible wear a properly fitted NIOSH/MSHA approved particulate respirator.

### Respiratory Protection

Wear a NIOSH/MSHA approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas and if TLV is exceeded. A respiratory program that meets OSHA's 29CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

### Other Personal Protective Equipment

**Eyes/Face:** Wear protective safety glasses or goggles to avoid particulate irritation of the eye.

**Skin:** Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body covering should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.

**General:** Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

## 9. Physical and Chemical Properties

**Appearance:** Off white to white powder. Low to no odor

**Physical State:** Solid (powder) pH @ 25oC: ~ 7

**Vapor Pressure:** Not applicable Vapor Density (Air=1): Not applicable

**Boiling Point:** Not applicable Vapor Pressure (mmHg): Not applicable

**Freezing Point:** Not applicable Evaporation Rate (BuAc=1): Not applicable

**Melting Point:** Not applicable Percent Volatile: 0

**Softening Point:** Not Applicable Particle Size: Varies

**Solubility (H2O):** 0.21/100g Molecular Weight: ~172 g/mole

**Viscosity:** Not applicable Bulk Density: ~ 45-150lb/ft<sup>3</sup>

**Specific Gravity:** 2.3 - 2.5

## 10. Chemical Stability and Reactivity

**Stability:** Stable

**Conditions to Avoid:** Contact with incompatibles

Incompatibility: Acids. None known

Hazardous Polymerization: Will not occur

Hazardous Decomposition: Above 1450oC - calcium oxide (CaO) and sulfur dioxide (SO<sub>2</sub>)

## 11. Toxicological Information

### Acute Effects

Direct contact may cause eye, skin and/or respiratory irritation.

LD50/LC50: Not available for product

### Chronic Effects/Carcinogenicity

Crystalline Silica: Testing of dust from USG gypsum powders has not detected respirable crystalline silica. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e. silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June 1997, the International Agency for Research on Cancer (IARC) classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial workplace situations. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors effecting its biological activity or distribution of its polymorphs. IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

## 12. Ecological Information

**Environmental Toxicity:** This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.

## 13. Disposal Considerations

**Waste Disposal Method:** Dispose of material in accordance with Federal, State, Provincial and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface waters.

## 14. Transport Information

U.S. DOT Information: Not a hazardous material per DOT Shipping requirements. Not classified or regulated.

### Regulatory Information

US Regulations: All ingredients of this product are included in the US Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

Food and Drug Administration (CFR Title 21, v.3, sec 184.1230) - Calcium Sulfate is generally recognized as safe (GRAS).

Canadian Regulations: All components of this product are included in the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

### CAUTION:

Dust can be generated during use and handling. Dust may cause eye, skin, nose, throat or upper respiratory irritation. Avoid inhalation of dust and eye contact. Use proper ventilation to reduce dust exposure. If dusty, wear NIOSH/MSHA approved respiratory protection. Wear eye protection to avoid particulate irritation of the eye. If eye contact occurs, flush thoroughly with water for at least 15 minutes. If irritation persists, call physician. Product safety information: 1-800-507-8899 or [www.usg.com](http://www.usg.com).

## KEEP OUT OF REACH OF CHILDREN

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