

# SAFETY DATA SHEET

## Gypsum

### Section 1. Identification

**GHS product identifier** : Gypsum

**Other means of identification** : Gypsum, Calcium(II) sulfate dehydrate, Gypsum stone, Hydrated calcium sulfate, Mineral white

**Identified uses** : Used in construction products, as a fertilizer, soil amendment, and cement manufacturing

**Supplier's details** : Pete Lien & Sons, Inc.  
PO Box 440  
Rapid City, SD 57702

**Emergency telephone number (hours of operation)** : (605) 342-7224 (Monday-Friday 8am-5pm)

### Section 2. Hazards identification

**Classification of the substance or mixture** : SKIN IRRITANT – 2  
EYE IRRITANT – 2B  
SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE [Respiratory System] - Category 1  
Repeated Exposure  
CARCINOGEN - Category 1A

GHS label elements



**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : May cause cancer through inhalation. Causes damage to lungs, kidneys, and autoimmune system through prolonged and repeated exposure by inhalation. Causes skin irritation and eye irritation.

Precautionary statements

**Prevention** : Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Do not breathe dusts or mists. Do not eat, drink, or smoke while manually handling this product. Wash skin thoroughly after manually handling this product. Wear eye protection and respiratory protection following this SDS, NIOSH guidelines and other applicable regulations. Use protective gloves if manually handling this product.

**Response** :If swallowed-If ingested, intestinal obstruction may occur if the material hardens. If gastrointestinal discomfort occurs and if person is conscious, give a large quantity of water and induce vomiting; however never attempt to make an unconscious person drink or vomit.  
 If on Skin (or hair): Rinse skin after manually handling and wash contaminated clothing if there is potential for direct skin contact before reuse.  
 If inhaled excessively: Remove person to fresh air and keep comfortable for breathing.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, and continue rinsing.  
 If exposed, concerned, unwell, or irritation of the eyes, skin, mouth, or throat/nasal passage persist: Get medical attention.

**Storage** : Avoid creating dust when handling, using or storing. Use with adequate ventilation to keep exposure below recommended exposure limits.

**Disposal** : Dispose of products in accordance with local, regional, national and international regulations.

**Hazards not otherwise classified** : None known

**Ingredients with unknown toxicity** : Not Applicable

**Supplemental Information:**

Respirable Crystalline Silica (RCS) may cause cancer. Gypsum is a naturally occurring mineral complex that contains varying quantities of quartz (crystalline silica). In its natural bulk state, Gypsum is not a known health hazard. Gypsum may be subject to various natural or mechanical forces that produce small particles (dust) which may contain respirable crystalline silica (particles less than 10 micrometers in aerodynamic diameter). Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC and NTP; ACGIH states that it is a suspected cause of cancer. Other forms of RCS (e.g., tridymite and cristobalite) may also be present or formed under certain industrial processes.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Calcium Carbonate

**CAS number/other identifiers**

Component	CAS #	% by weight
Calcium Sulfate, Dihydrate CaSO <sub>4</sub> · 2H <sub>2</sub> O	10101-41-4	>50

**Impurities** : Product may contain >0.1% crystalline silica. Impurities will vary from source to source.

## Section 4. First aid measures

**Description of necessary first aid measures**

**Eye Contact** : Contact can cause irritation of eyes. Immediately flush eyes with generous amounts of water for at least 15 minutes. Pull back the eyelid to ensure that all Gypsum dust has been washed out. Remove

contact lenses, if present and easy to do and continue rinsing. Beyond flushing do not attempt to remove material from the eye(s). Seek medical attention if irritation develops or persists.

**Skin Contact** : Wash exposed area with soap and water after manually handling and wash contaminated clothing if there is potential for direct skin contact. Seek medical attention if irritation develops and persists.

**Ingestion** : If ingested, intestinal obstruction may occur if the material hardens. If gastrointestinal discomfort occurs and if person is conscious, give a large quantity of water and induce vomiting; however never attempt to make an unconscious person drink or vomit. Get medical attention.

**Inhalation** : Move to fresh air. Dust in nose and throat should clear spontaneously. Seek medical attention if irritation persists or develops later.

**Most important symptoms/effects, acute and delayed** : Long-term exposure by inhalation may cause permanent damage. This product contains crystalline silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled. Inhalation of silica can also cause a chronic lung disorder, silicosis.

Direct skin and eye contact with dust may cause irritation by mechanical abrasion. Some components of the product are also known to cause irritation to skin, eyes and mucous membranes. Ingestion of large amounts may cause gastrointestinal irritation and blockage. Inhalation of dust may irritate nose, throat, mucous membranes and respiratory tract. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate limits. Repeated excessive exposure may cause pneumoconiosis, such as silicosis and other respiratory effects.

**Indication of immediate medical attention and special treatment needed, if necessary:** See first aid information above. Note to Physicians: Provide general supportive measures and treat symptomatically.

## Section 5. Fire-fighting measures

**Extinguishing Media** : Not Flammable; use agent most appropriate to extinguish surrounding fire.

**Unsuitable Extinguishing Media:** None known

**Fire Hazards** : Contact with powerful oxidizing agents may cause fire and/or explosions (see Section X of this SDS). Contact with diazomethane vapor may cause an exotherm which may lead to detonation.

**Hazardous Combustion Products:** None known

**Special Protective Equipment and Fire Fighting Instructions:**

Use protective equipment and appropriate for surrounding materials.

## Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Spill/Leak Procedures** : Persons involved in cleaning should first follow the precautions defined in Section VII of the SDS. Spilled material, where dust is generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Avoid generating dust. Do not clean up with

compressed air or dry sweep. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Wear appropriate personal protective equipment as specified in Section VIII including appropriate respirators during and following clean up or whenever airborne dust is present to ensure worker exposures remain below occupational exposure limits.

### **Methods and materials for containment and cleaning up**

**Containment** : Place dust in a covered container appropriate for disposal. Do not wash down drains, this material may plug drains. Dispose of the dust according to federal, state, and local regulations. This product is not subject to the reporting requirements of SARA Title III Section 313, and 40 CFR 372.

## **Section 7. Handling and storage**

This product is not intended or designed for and should not be used as an abrasive blasting medium or for foundry applications. Follow protective controls set forth in Section VIII of this SDS when handling this product. Dust containing respirable crystalline silica and other components that may be an irritant may be generated during processing, handling and storage. Use good housekeeping procedures to prevent the accumulation of dust in the workplace.

Do not breathe dust. Avoid contact with skin and eyes. Do not store near food or beverages or smoking materials. Do not stand on piles of materials; it may be unstable. The dihydrate form of calcium sulfate typically does not set with water however dew point conditions or other conditions causing presence of moisture may harden gypsum during storage.

Use adequate ventilation and dust collection equipment and ensure that the dust collection system is adequate to reduce airborne dust levels to below the appropriate OELs. If the airborne dust levels are above the appropriate OELs, use respiratory protection during the establishment of engineering controls. Refer to Section VIII - Exposure Controls/Personal Protection for further information.

In accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, 1915.99, 1917.28, 1918.90, 1926.59, 1928.21), state, and/or local right-to-know laws and regulations, familiarize your employees with this SDS and the information contained herein. Warn your employees, your customers and other third parties (in case of resale or distribution to others) of the potential health risks associated with the use of this product and train them in the appropriate use of personal protective equipment and engineering controls, which will reduce their risks of exposure.

See also ASTM International standard practice E 1132-06, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica."

## **Section 8. Exposure controls/personal protection**

### **Exposure limits**

<b>Component</b>	<b>CAS #</b>	<b>Exposure limits</b>
Calcium Sulfate, Dihydrate CaSO <sub>4</sub> · 2H <sub>2</sub> O	10101-41-4	OSHA PEL: 5mg/m <sup>3</sup> (respirable)  NIOSH TWA: 5mg/m <sup>3</sup> (respirable)
Crystalline Silica SiO <sub>2</sub>	14808-60-7	OSHA PEL: 10mg/m <sup>3</sup> divided by (the percentage of silica in the dust plus 2) (respirable) ACGIH TLV: 0.025 mg/m <sup>3</sup> (respirable)

**Engineering controls**

Ventilation: Use local exhaust, general ventilation or natural ventilation adequate to maintain exposures below appropriate exposure limits.

Other control measures: Respirable dust and crystalline silica levels should be monitored regularly. Dust and crystalline silica levels in excess of appropriate exposure limits should be reduced by implementing feasible engineering controls, including (but not limited to) dust suppression (wetting), ventilation, process enclosure and enclosed employee work stations.

**Individual Protection Measures**

**Respiratory Protection** : Use NIOSH/MSHA approved respirators if airborne concentration exceeds PEL.

**Skin Protection** : Use appropriate personal protective equipment as required.

**Eye Protection** : Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated. If irritation persists, get medical attention immediately. There is potential for severe eye irritation if exposed to excessive concentrations of dust for those using contact lenses.

**Thermal Hazards** : Not Anticipated. Wear appropriate thermal protective clothing, when necessary.

**General Hygiene** : There are no known hazards associated with this material when used as recommended. Following the guidelines in this SDS are recognized as good industrial hygiene practices. Avoid breathing dust. Avoid skin and eye contact. Wash dust-exposed skin with soap and water before eating, drinking, smoking and using toilet facilities. Wash work clothes after each use.

## Section 9. Physical and chemical properties

Physical State	: Solid
Appearance	: White or off-white material
Odor	: Not applicable
Odor threshold	: Not applicable
pH at 25 degrees C	: Not applicable
Melting point	: Not applicable
Initial boiling point	: Not applicable
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Not applicable
Lower and upper explosive (flammable) limits	: Not applicable
Vapor pressure	: Not applicable
Vapor density	: Not applicable
Specific Gravity	: 2.17-2.32
Solubility in water	: 0 to 2% @ 20°C
Partition coefficient: n octanol/water	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not applicable

Viscosity : Not applicable

## Section 10. Stability and reactivity

- Reactivity** : This 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.
- Incompatible materials** : Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Contact with diazomethane vapor may cause an exotherm which may lead to detonation. Calcium sulfate is reduced violently or explosively on heating an intimate mixture with aluminum powder to a suitably high temperature to initiate the reaction.
- Hazardous decomposition products** : Silica dissolves in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.

## Section 11. Toxicological Information

**Information on the likely routes of exposure:** See First Aid discussion above.

- Inhalation** : Repeated inhalation of respirable crystalline silica (quartz) may cause silicosis, a fibrosis (scarring) of the lungs. Silicosis is irreversible and may be fatal. Silicosis increases the risk of contracting pulmonary tuberculosis. Some studies suggest that repeated inhalation of respirable crystalline silica may cause other adverse health effects including lung and kidney cancer.
- Skin Contact** : Gypsum dust may cause irritation through mechanical abrasion
- Eye Contact** : Gypsum dust may cause irritation through mechanical abrasion
- Ingestion** : Not likely, due to form of the product. However, accidental ingestion of the content may cause discomfort. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

**Symptoms related to the physical, chemical and toxicological characteristics:** Gypsum dust: Discomfort in chest. Shortness of breath, Coughing.

**Delayed and immediate effects and also chronic effects from exposure:** Not expected to be acutely toxic. This product is not expected to be a skin hazard. Direct contact with eyes may cause temporary irritation. No respiratory sensitizing effects known. Not known to be a dermal irritant or sensitizer. No data available to indicate product or any component present at greater than 0.1% are mutagenic or genotoxic.

**Numerical measures of toxicity:** No LD50/LC50 have been identified for this product's components.

**Carcinogen listing:** Gypsum is not listed by MSHA, OSHA, or IARC as a carcinogen, but this product contains crystalline silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled

## Section 12. Ecological information

- Ecotoxicity** : There is no data available.
- Persistence and degradability** : There is no data available.
- Bioaccumulative potential** : There is no data available.
- Mobility in soil** : There is no data available.

## Section 13. Disposal considerations

<b>Disposal Instructions</b>	: Collect and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations. The above information applies to the product only as sold. The product may be contaminated during use and it is the responsibility of the user to assess the appropriate disposal method in that situation.
<b>Hazardous waste code</b>	: Not regulated
<b>Waste from residues/ unused product</b>	: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)
<b>Contaminated packaging</b>	: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty packaging materials should be recycled or disposed of in accordance with applicable regulations and practices.

## Section 14. Transport information

<b>DOT</b>	:Not regulated as dangerous goods
<b>IATA</b>	:Not regulated as dangerous goods
<b>IMDG</b>	:Not regulated as dangerous goods
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	: Not applicable

## Section 15. Regulatory information

OSHA: Crystalline Silica is not listed as a carcinogen.

SARA Title III: Section 311 and 312: Immediate health hazard and delayed health hazard.

TSCA: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7.

RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 40 CFR §302.4

EPCRA (Emergency Planning and Community Right to Know Act): Crystalline silica (quartz) is not an extremely hazardous substance under regulations of the Emergency Planning and Community Right to Know Act, 40 CFR Part 355, Appendices A and B and is not a toxic chemical subject to the requirements of Section 313.

Clean Air Act: Crystalline silica (quartz) mined and processed by Martin Marietta Materials was not processed with or does not contain any Class I or Class II ozone depleting substances.

FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3).(The FDA standard primarily applies to products containing silica used in the coatings of food contact surfaces).

## Section 16. Other information

### History

Date of issue (mm/dd/yyyy) : 06/01/2015

Version : 1

Disclaimer: The information contained in this document applies to this specific material as supplied. Pete Lien & Sons, Inc. believes that the information contained in this SDS is accurate. The suggested precautions and recommendations are based on recognized good work practices and experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance as not all use circumstances can be anticipated. The suggestions should not be confused with nor followed in violation of applicable laws, regulation, rules or insurance requirement.

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