



Product Name: SO4 (Standard Grade)

Updated: December 2018

### Section 1 – PRODUCT AND COMPANY IDENTIFICATION

**Manufacturer:** Calcium Products, 2520 N. Loop Dr., Suite 7100, Ames, IA 50010  
**Product Name:** SO4 (Standard Grade)  
**Common Name:** Calcium sulfate dihydrate, gypsum  
**Chemical Name:** Calcium sulfate dihydrate  
**Chemical formula:**  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$   
**Chemical Type:** Mineral ore  
**Emergency Contact:** (800) 255-8196 (M – F, 7:30am – 4:30pm CST)  
**Poison Control:** (800) 222-1222 (24 hours)

### Section 2 – HAZARDS IDENTIFICATION

**DESCRIPTION:** Brown granular mix with slight mineral odor.

**HEALTH HAZARDS:** May be irritating to the respiratory tract, eyes, and skin. Ingestion may cause gastrointestinal upset.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing respiratory, skin, or eye conditions.

**EYE CONTACT:** Direct contact with dust may cause irritation by mechanical abrasion.

**SKIN CONTACT:** Direct contact may cause irritation by mechanical abrasion.

**INGESTION:** If ingested, intestinal obstruction may occur if the material hardens, especially in the pyloric region.

**INHALATION:** Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits.

### Section 3 – COMPOSITION & INFORMATION ON INGREDIENTS

INGREDIENTS	CAS REGISTRY#	% BY WEIGHT	MSHA/OSHA PEL	ACGIH TLV
Calcium sulfate dihydrate	10101-41-4	85-95%	(T) 15 mg/m <sup>3</sup>	(I) 10 mg/m <sup>3</sup>
Calcium lignosulfonate	8061-52-7	1-2%		

(T) = total dust (I) = inhalable fraction

### Section 4 – FIRST AID MEASURES

**EYES:** In case of contact, immediately flush eyes with water for a minimum of 15 minutes. Warm water is recommended but cold water may be used.

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**SKIN:** In case of skin contact, immediately rinse area with water. Cover irritated are with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Seek medical attention if irritation persists.

**INGESTION:** Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention of contact poison control center immediately.

**INHALATION:** If a person inhales a large amount of nuisance dust, move exposed person to fresh air at once. Other measures are usually unnecessary.

#### **Section 5 – FIRE FIGHTING MEASURES**

**FLAMMABLE PROPERTIES:** Not flammable or combustible. NFPA Hazard Class No: 1/0/0

**EXTINGUISHING MEDIA:** Dry chemical, foam, water, fog or spray.

**FLAMMABLE LIMITS IN AIR:** Not flammable.

**UNUSUAL FIRE AND EXPLOSION HAZARD:** None.

**HAZARDOUS COMBUSTION PRODUCTS:** None. Above 1450°C, material can decompose and release sulfur dioxide (SO<sub>2</sub>) and oxides of carbon.

#### **Section 6 – ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Use dry methods to collect spilled materials, and reuse clean materials. Avoid generating dust. Do not clean up with compressed air. Minimize dust by evacuating area downwind in the case of large spills. Store contaminated materials in dry, sealed plastic or non-aluminum metal containers. Residues on surfaces may be washed with water.

None of the components in this product are subject to the reporting requirements of Title III or SARA, 1986 and 40 CFR 372.

#### **Section 7 – HANDLING AND STORAGE**

Ensure proper ventilation, and respiratory and eye protection are used under dusty conditions. Dew point conditions or other conditions causing presence of moisture will harden gypsum during storage. Excessive particulate concentrations in workplace must be avoided even though it is inert and non-toxic.

#### **Section 8 – EXPOSURE CONTROL & PERSONAL PROTECTION**

**RESPIRATORY PROTECTION:** NIOSH approved particulate respirator if required.

**EYE PROTECTION:** Safety glasses with side shield, goggles, or face mask recommended.

**SKIN PROTECTION:** Long sleeves, cotton gloves recommended.

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**VENTILATION:** Local exhaust ventilation recommended.

**Section 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE AND ODOR:** Light brown granular mix with slight detectable odor.

**SPECIFIC GRAVITY:** 2.6 – 2.75 g/cc                      **pH:** 6.72

**BOILING POINT:** N/A    **VAPOR PRESURE:** N/A

**VAPOR DENSITY IN AIR:** N/A                                      **FLASH POINT:** Not flammable.

**EVAPORATION RATE:** Zero    **SOLUBILITY IN WATER:** 2.1 g/L @ 20°C

**Section 10 – STABILITY AND REACTIVITY**

**STABILITY:** Stable    **CONDITIONS TO AVOID:** Items listed under Incompatibility.

**INCOMPATIBILITY (Materials to avoid):**  
Aluminum (at high temperatures), diazomethane

**HAZARDOUS DECOMPOSITION PRODUCTS:**  
When heated to high temperatures above 825°C, gypsum may emit toxic fumes of oxides of sulfur and calcium.

**Section 11 – TOXICOLOGICAL INFORMATION**

**Calcium sulfate dihydrate**

**Exposure route:** Inhalation, skin, and/or eye contact.

**Target organs:** Eyes, skin, respiratory system.

**Acute Effect:** Calcium sulfate dihydrate dust has an irritant action on mucous membranes of the respiratory tract and eyes. There have been reports of conjunctivitis, chronic rhinitis, laryngitis, pharyngitis, impaired sense of smell and taste, bleeding from the nose and reactions of tracheal and bronchial membranes in exposed workers.

**Section 12 – ECOLOGICAL INFORMATION**

No data available.

**Section 13 – DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD**

May be disposed of as an inert solid in sanitary landfill or by other procedures in accordance with all federal, state, and local regulations. May be used as a supplement on land and on some agricultural products.

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**Section 14 – TRANSPORT INFORMATION**

DOT HAZARD CLASSIFICATION: None

PLACARD REQUIRED: None

LABEL REQUIRED: Label as required by OSHA Hazards Communication Standard [29 CFR 1910.1200 (f)] and applicable state and local regulations.

**Section 15 – REGULATORY INFORMATION**

FDA: Product is manufactured for agricultural applications. As such, FDA regulations do not apply.

**Section 16 – OTHER INFORMATION**

Revised June 2015

CFR: US Code of Federal Regulations

DOT: Department of Transportation

IARC: International Agency for Research on Cancer

IDLH: Immediately Dangerous to Life and Health

NIOSH: National Institute for Occupational Safety and Health, US Department of Health and Human Services

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limits

SARA Title III: Title III of the Superfund Amendments and Reauthorization Act, 1986

TLV: Threshold Limit Value

TWA: Time-weighted Average

FDA: Food and Drug Administration