




Safety Data Sheet

1. PRODUCT IDENTIFICATION AND USE:

Product name:	Gypsum
Chemical Name & Synonyms:	Calcium Sulfate Dihydrate (CaSO ₄ ·2H ₂ O) Calcium Sulfate (CaSO ₄), Landplaster, Alabaster, Gypsum, SynGyp, FGD gypsum
Material Identification and Use:	Synthetic Gypsum is a byproduct of a coal-burning power plant equipped with sulfur emissions scrubbers. It is widely used as a replacement for natural gypsum in the cement milling process or as a primary raw material for the manufacture of gypsum drywall.
Supplier:	Charah Solutions, Inc.
Address:	12601 Plantside Drive Louisville, KY 40299
Telephone:	877-314-7724
Fax:	502-245-7398

Note: This SDS covers products from different sources. The concentrations of constituents will vary slightly.

2. HAZARDS IDENTIFICATION:

Classification (GHS-US)	Respiratory irritant 3 Eye irritant 2B
Label Elements	
Hazard Pictograms	
Hazard Statements	May cause respiratory irritation. Causes eye irritation.
Signal Word	Warning
Precautionary Statements	
Prevention	Avoid breathing dust. Wear eye protection/face protection. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Use only outdoors or in a well-ventilated area.
Response	If inhaled: Remove the person to fresh air and keep them comfortable while breathing. Call a doctor if you feel unwell. 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 on skin: No special response indicated. If swallowed: No special response indicated.
Storage	Store in a well-ventilated place. Keep container tightly closed.
Disposal	Dispose of contents/container in accordance with local/state/national regulations.
Other Hazards	None determined.

3. COMPOSITION AND INFORMATION ON INGREDIENTS:

Component/Ingredient	CAS #	Percent Present (Range)
Calcium sulfate dihydrate	10101-41-4	90 - 100
Nuisance Dusts (Particulates not otherwise regulated)	None	< 1 - 2

Other Components

Synthetic gypsum (calcium sulfate dihydrate) is manufactured when limestone reacts with sulfur dioxide released into a gas stream from the combustion of coal. Trace amounts of naturally occurring chemical compounds might be detected during chemical analysis, depending on the source of the limestone and coal. These may include trace amounts of magnesium sulfate, free crystalline or amorphous silica, and sulfur compounds.

4. FIRST AID MEASURES:

Description of First Aid Measures Eyes	Rinse eyes and under lids cautiously with clean water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin	No special measures required.
Inhalation	Remove the person to fresh air away from dust and keep them comfortable for breathing. If symptoms persist, obtain medical attention.
Ingestion	No special measures required.
Important Symptoms and Effects (Acute and Delayed) Eyes	May cause eye irritation and surface scratching due to particle abrasion.
Skin	None expected.
Inhalation	May irritate the nose and throat if dust is inhaled. May cause coughing, sneezing, and mucous discharge.
Ingestion	None expected.
Recommendations for Immediate Medical Care or Special Treatment	Seek immediate medical attention for inhalation of large quantities of dust. Seek immediate medical attention if material comes into contact with the eyes and cannot be immediately removed.

5. FIRE FIGHTING MEASURES:

Fire Hazards	None. Material is not considered flammable or combustible.
Extinguishing Media	Use water or water spray to extinguish any fires involving this material.
Extinguishing Media to Avoid	None.
Hazards of Combustion	None.
Fire Fighting Recommendations	Firefighters should always wear full protective gear when fighting any fire. Refer to Section 9 for flammability information.

6. ACCIDENTIAL RELEASE MEASURES:

Precautions	Avoid creating dust.
Personal Protection	Wear respiratory protection and protective eyewear to avoid eye contact.
Emergency Procedures	Ventilate area and avoid creating dust. Remove unnecessary people from the area.
Containment Procedures	Barricade solid material to prevent additional spillage. Scoop or vacuum up spilled material while avoiding dust creation.

7. HANDLING AND STORAGE:

Safe Handling Practices	Avoid contact with eyes. Avoid breathing dust. Use only in well-ventilated areas. Wear appropriate personal protective equipment to prevent eye contact and use respiratory protection equipment in dusty or poorly ventilated areas.
Safe Storage Measures	Store in dry, well-ventilated areas away from incompatible materials. If stored in containers, keep containers closed when not in use.
Incompatible Materials	Diazomethane, aluminum, phosphorus, strong oxidizers, strong acids [Note: Hygroscopic (i.e., absorbs moisture from the air).]

8. EXPOSURE CONTROLS / PERSONAL PROTECTIVE EQUIPMENT:

Exposure Limits for Individual Components

(T= Total Respirable, R= Respirable fraction, I= Inhalable - aerosol)

Component	OSHA PEL	ACGIH TLV	NIOSH REL
Calcium sulfate dihydrate	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³	10 mg/m ³ (T); 5 mg/m ³ (R)
Nuisance Dusts (PNOR)	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³	Not established



Exposure / Engineering Controls	Use outdoors in well-ventilated areas; otherwise, employ natural or mechanical ventilation to maintain exposure within applicable limits.
Personal Protection	Avoid contact with skin or eyes. Avoid creating or breathing dust.
Face and Eyes	Safety glasses with side shields or protective goggles should be worn while using this product. For extremely dusty conditions, non-vented or indirectly vented goggles are recommended. Avoid wearing contact lenses when using this product.
Body	Long-sleeved shirts and trousers should be worn while using this material.
Respiratory	If exposure levels cannot be maintained below acceptable limits, suitable particulate-filtering facemasks or respirators approved by MSHA/NIOSH should be worn in accordance with the user's respiratory protection program and OSHA/MSHA guidelines.
Hands	No special precautions are indicated.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical State	Solid, powder, or lumps	Specific Gravity	2.32
Appearance & Color	White, gray, tan	Flash Point/Method	None. Not flammable.
Odor	None	Auto Ignition Temperature	Not determined
pH	5 - 7	Lower Flammability Limit	Not applicable
Boiling Point	Not applicable	Upper Flammability Limit	Not applicable
Solubility (Water)	Negligible (<1%)	Octanol/H₂O Coefficient	Not determined
Evaporation Rate	Not applicable	Viscosity	Not applicable
Melting Point	1450°C	Freezing Point	Solid at room temperature
Vapor Density	Not applicable	Explosion Risk: Static	Not considered a hazard
Vapor Pressure	Not applicable	Explosion Risk: Shock	Not considered a hazard

10. STABILITY AND REACTIVITY:

Reactivity	Stable material. Not considered reactive
Chemical Stability	Stable at standard temperature and pressures
Hazardous Reactions	None. Hazardous polymerization will not occur.
Conditions to Avoid	Material is hygroscopic and will absorb moisture from the air.
Incompatible Materials	Diazomethane, aluminum, phosphorus, strong acids, strong oxidizers
Decomposition Hazards	Calcium oxide and oxides of sulfur are generated when the material melts

11. TOXICOLOGICAL INFORMATION:

Acute Toxicity	Not classified.
LD50/LC50 Data	Oral LD50 Rat 3000 mg/kg
Skin Corrosion/Irritation	Not reported/no data available.
Critical Eye Damage/Irritation	May cause eye injury due to particle abrasion and mechanical irritation.
Respiratory or Skin Sensitization	Not reported/no data available.
Germ Cell Mutagenicity	Not reported/no data available.
Teratogenicity	Not reported/no data available.
Carcinogenicity	Not reported/no data available.
Specific Organ Toxicity (Single Exposure)	Not reported/no data available.
Specific Organ Toxicity (Repeated Exposure)	May cause lung damage through repeated or prolonged exposure to respirable dust.
Reproductive Toxicity	Not reported/no data available.
Aspiration Respiratory Hazard	Not reported/no data available.
Symptoms: Inhalation	Coughing, sneezing, and mucous discharge.
Symptoms: Skin Contact	May cause localized reddening through mechanical abrasion.
Symptoms: Eye Contact	Redness and itching. Extended contact may lead to corneal abrasion/ulceration.
Symptoms: Ingestion	None.
Other Toxicological Information	No additional data available.

Components	Toxicity	Carc: IARC	Carc: NTP	Carc: OSHA
Calcium sulfate dihydrate	Oral LD50 Rat 3000 mg/kg	Not listed	Not listed	Not listed
Nuisance Dusts (PNOR)	No data	Not listed	Not listed	Not listed

12. ECOLOGICAL INFORMATION:

General Ecotoxicity	Not classified
Persistence and Degradability	Not reported/no data available
Bioaccumulation Potential	Not reported/no data available
Mobility in Soil to Groundwater	Not reported/no data available
Environmental Fate	Not reported/no data available
Other Environmental Precautions or Information	None.

13. DISPOSAL CONSIDERATIONS:

Disposal Methods	Dispose of as an inert, non-metallic mineral in accordance with applicable federal, state, and local regulations.
Special Considerations	Avoid creating or breathing dust during disposal. Avoid contact with the eyes.
Other Disposal Information	None.

14. TRANSPORT INFORMATION:

Proper Shipping Name	N/A – not regulated.
Hazard Class	N/A – not regulated.
UN Shipping ID Number	N/A – not regulated.
Packing Group	N/A – not regulated.
Environmental/IMDG Codes	N/A – not regulated.

15. REGULATORY INFORMATION:

Federal:

This product contains one or more chemical components or ingredients that may require identification and/or reporting under SARA Section 302, SARA Section 311/312/313, CERCLA, and/or TSCA. An examination of the components of this product should be conducted by a qualified environmental professional to determine if such identification or reporting is required by federal law.

Components: Calcium sulfate dehydrate

State:

This product contains one or more chemical components or ingredients that are included or listed on the hazardous substances lists for one or more of the following states: California, Maine, Minnesota, New Jersey, Pennsylvania, and Rhode Island. An examination of this product's components should be conducted by a qualified environmental, safety, and health professional to determine the specific requirements for those states.

Components: Calcium sulfate dehydrate

16. OTHER INFORMATION:

This SDS was prepared from information provided by raw materials suppliers to Charah Solutions, Inc.

Date drawn up:	May 2004
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Contact:	Product Manager VP - Technical Services

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