

# Magruder 240451 0-0-50

*results due May 15, 2024*

## Guaranteed Analysis

Soluble Potassium (K<sub>2</sub>O) ..... 50 %  
Sulfur (S) ..... 17.5 %  
    17.5 % Sulfate Sulfur  
Chloride (Cl), maximum ..... 0.8 %  
Derived from: Potassium Sulfate

*Also analyze for:*

*As (ppm), Cd (ppm), Cr (ppm), Co (ppm), Pb (ppm),  
Hg (ppm), Mo (ppm), Ni (ppm), Se (ppm), Cu (%) and Zn (%)*

*The units above are those required for reporting data from this  
Magruder sample. They may not be the units required on a  
commercial fertilizer label.*

*Note: This Magruder Check Sample material is not to be used  
in the manufacture of products nor applied to any crops or for  
other fertilizer uses. It is intended for analytical testing  
purposes only.*

**SDS for this product can be found at:**

<http://www.magruderchecksample.org/SDS/240451GuarSDS.pdf>

# SDS for Magruder 240451

## 1. Product and Company Identification

Diamond K Gypsum, Inc.  
1720 South Redhills Drive  
Richfield, Utah 84701  
(435) 896-8870  
Fax (435) 896-8893  
www.diamondkgypsum.com  
Product Safety 1-800-497-7861

**Product Identifier:** Sulfate of Potash  
**Recommended Use:** Specialty crop nutrient, turf grass fertilizer, general fertilizer uses, and speciality industrial uses.  
**Recommended Restrictions:** None Known.

## 2. Hazards Identification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.  
**Signal word** Not available.  
**Hazard statement** Not available.  
**Precautionary statement**  
**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

## 3. Composition/Information on Ingredients

### Substance

Chemical name	Common name and synonyms	CAS number	%
Potassium sulfate		7778-80-5	96 - 100

## 4. First Aid Measures

**Inhalation** If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention. Call a physician if symptoms develop or persist.

**Skin contact** Brush away excess of dry material. Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.

**Eye contact** Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

**Ingestion** Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

**Most important symptoms/effects, acute and delayed** Direct contact with eyes may cause temporary irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

**Indication of immediate medical attention and special treatment needed**

Symptoms may be delayed.

**General information**

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. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

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## 5. Fire Fighting Measures

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**Suitable extinguishing media**

Treat for surrounding material.

**Unsuitable extinguishing media**

None known.

**Specific hazards arising from the chemical**

Firefighters should wear a self-contained breathing apparatus.

**Special protective equipment and precautions for firefighters**

Firefighters should wear full protective clothing including self contained breathing apparatus.

**Fire-fighting equipment/instructions**

In the event of fire, cool tanks with water spray.

**Specific methods**

Cool containers exposed to flames with water until well after the fire is out.

**Hazardous combustion products**

May include and are not limited to: Oxides of sulfur.

**Explosion data**

**Sensitivity to mechanical impact**

Not available.

**Sensitivity to static discharge**

Not available.

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## 6. Accidental Release Measures

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

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear a dust mask if dust is generated above exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. For personal protection, see section 8 of the SDS.

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

Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Do not discharge into lakes, streams, ponds or public waters.

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## 7. Handling and Storage

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**Precautions for safe handling**

Avoid breathing dust.  
Minimize dust generation and accumulation.  
Provide appropriate exhaust ventilation at places where dust is formed.  
In case of insufficient ventilation, wear suitable respiratory equipment.  
Use good industrial hygiene practices in handling this material.  
Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

Guard against dust accumulation of this material.  
Store in a well-ventilated place.  
Store in a closed container.  
Store away from incompatible materials (see Section 10 of the SDS).  
Keep out of reach of children.

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## 8. Exposure Controls/Personal Protection

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**Occupational exposure limits**

No exposure limits noted for ingredient(s).

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Exposure guidelines**

This material does not have established exposure limits.

**Appropriate engineering controls**

TWA PEL: No specific limits have been established for potassium sulfate (a soluble substance). As a guideline, OSHA (United States) has established the following limits which are generally

recognized for inert or nuisance dust. Particulates Not Otherwise Regulated (PNOR): 5mg/cu.m. Respirable Dust 8-Hour TWA PEL, 15mg/cu.m. Total Dust 8-Hour TWA PEL.

TWA TLV: No specific limits have been established for potassium sulfate (a soluble substance). As a guideline, ACGIH (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates (insolubles) Not Otherwise Classified (PNOC): 10mg/cu.m. Inhalable Particulate 8-Hours TWA TLV, 3mg/cu.m. Respirable Particulate TWA TLV.

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

<b>Eye/face protection</b>	Wear safety glasses with side shields.
<b>Skin protection</b>	
<b>Hand protection</b>	Rubber gloves. Confirm with a reputable supplier first.
<b>Other</b>	As required by employer code.
<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator or NIOSH-approved filtering facepiece.
<b>Thermal hazards</b>	Not available.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.

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### 9. Physical and Chemical Properties

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<b>Appearance</b>	Solid.
<b>Physical state</b>	Solid.
<b>Form</b>	Crystals, Granular or Powder
<b>Color</b>	white to brown
<b>Odor</b>	Odorless
<b>Odor threshold</b>	Not available.
<b>pH</b>	7 (10% solution) 7 Aqueous solution is neutral
<b>Melting point/freezing point</b>	1952.6 °F (1067 °C)
<b>Initial boiling point and boiling range</b>	3072.2 °F (1689 °C) 3072.2 °F (1689 °C)
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	2.66 @21°C (H2O = 1) 2.66
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	None
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable
<b>Flammability limit - upper (%)</b>	Not applicable
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	< 0 kPa at 25 °C
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Appreciable
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.

**Viscosity** Not available.

**Other information**

**Density** 2.66 g/cm<sup>3</sup> estimated

**Flash point class** Flammable IB

**Molecular formula** H<sub>2</sub>-O<sub>4</sub>-S<sub>2</sub>K

K<sub>2</sub>SO<sub>4</sub>

**Molecular weight** 174.27

176.26 g/mol

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## 10. Stability and Reactivity

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<b>Reactivity</b>	May react with incompatible materials.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Contact with incompatible materials. Do not mix with other chemicals.
<b>Incompatible materials</b>	Magnesium. Aluminum.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of sulfur.

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## 11. Toxicological Information

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<b>Routes of exposure</b>	Eye, Skin contact, Inhalation, Ingestion.
<b>Information on likely routes of exposure</b>	
<b>Ingestion</b>	May cause stomach distress, nausea or vomiting.
<b>Inhalation</b>	Inhalation of dusts may cause respiratory irritation.
<b>Skin contact</b>	May be irritating to the skin.
<b>Eye contact</b>	May be irritating to eyes. Dust in the eyes will cause irritation.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Direct contact with eyes may cause temporary irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

**Information on toxicological effects**

**Acute toxicity**

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Potassium sulfate (CAS 7778-80-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	6600 mg/kg

<b>Skin corrosion/irritation</b>	May cause irritation.
<b>Exposure minutes</b>	Not available.
<b>Erythema value</b>	Not available.
<b>Oedema value</b>	Not available.
<b>Serious eye damage/eye irritation</b>	Dust in the eyes will cause irritation.

<b>Corneal opacity value</b>	Not available.
<b>Iris lesion value</b>	Not available.
<b>Conjunctival reddening value</b>	Not available.
<b>Conjunctival oedema value</b>	Not available.
<b>Recover days</b>	Not available.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	Not available.
<b>Germ cell mutagenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Mutagenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Carcinogenicity</b>	Not classified or listed by IARC, NTP, OSHA and ACGIH.
<b>Reproductive toxicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Teratogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Specific target organ toxicity - single exposure</b>	Not available.
<b>Specific target organ toxicity - repeated exposure</b>	Not available.
<b>Aspiration hazard</b>	Not available.
<b>Chronic effects</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Further information</b>	Not available.
<b>Name of Toxicologically Synergistic Products</b>	Not available.

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## 12. Ecological Information

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<b>Ecotoxicity</b>	See below		
<b>Product</b>		<b>Species</b>	<b>Test Results</b>
Sulfate of Potash			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	510 - 880 mg/l, 96 hours
<b>Components</b>		<b>Species</b>	<b>Test Results</b>
Potassium sulfate (CAS 7778-80-5)			
Algae	IC50	Algae	2900 mg/L, 72 Hours
Crustacea	EC50	Daphnia	890 mg/L, 48 Hours
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	510 - 880 mg/l, 96 hours
<b>Persistence and degradability</b>	Not available.		
<b>Bioaccumulative potential</b>	Not available.		
<b>Mobility in soil</b>	Not available.		
<b>Mobility in general</b>	Not available.		
<b>Other adverse effects</b>	Not available.		

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## 13. Disposal Considerations

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<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Waste must be disposed of in accordance with federal, state/provincial and local environmental control regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

<b>Waste from residues / unused products</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>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

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## 14. Transport Information

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### U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

### Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

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## 15. Regulatory Information

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**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**WHMIS status** Not Controlled

**US federal regulations** This product is NOT known to be 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.

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - No  
 Delayed Hazard - No  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
 Not regulated.

### Other federal regulations

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Direct food additive

### US state regulations

**CA Proposition 65: (Health & Safety Code Section 25249.5)** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

### US. Massachusetts RTK - Substance List

Not regulated.

### US. Pennsylvania RTK - Hazardous Substances

Not regulated.

### US. Rhode Island RTK

Not regulated.

**Inventory status**

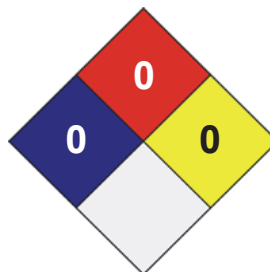
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**16. Other Information**

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

<b>HEALTH</b>	/ 0
<b>FLAMMABILITY</b>	0
<b>PHYSICAL HAZARD</b>	0
<b>PERSONAL PROTECTION</b>	X



**Disclaimer**

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document. The above SDS reflects the latest information on file with respect to hazards, properties and handling of this product. No warranty however, expressed or implied, is made with regard to the use of this information. The information in the sheet was written based on the best knowledge and experience currently available.

**Issue date**

Draft version.

**Effective date**

01-March-2015

**Expiry date**

01-March-2024

**Further information**

Not available.

**Prepared by**

Diamond K Gypsum, Inc. Phone: (435) 896-8870

**Other information**

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.