



DIAMOND K

MATERIAL SAFETY DATA SHEET

Section I. Chemical Product and Company Identification

Product Name: KMS

Supplier:

DIAMOND K, INC.
1720 SOUTH REDHILLS DRIVE
RICHFIELD, UTAH 84701
BUSINESS: 435-896-8870

24 - HOUR
EMERGENCY ASSISTANCE
CHEMTREC 1-800-424-9300

Synonym: Potassium magnesium sulfate, langbeinite, sulfate of potash magnesia, KMS

Chemical Name: Potassium magnesium sulfate

Chemical Family: Inorganic Salt

Chemical Formula: $K_2SO_4 \cdot 2MgSO_4$

Manufacturer: IMC Kalium

Material Uses: Fertilizer, Industrial applications

Section II. Composition and Information on Ingredients

Name	CAS#	Percent by Weight
Potassium magnesium sulfate	14977-37-8	97.0 - 98.8

Section III. Hazard Identification

Potential Acute Health Effect: Short term - This product may produce irritation of the eyes, skin, respiratory tract and digestive system. Due to its similarity to potassium sulfate and magnesium sulfate (Epsom Salts). It is possible that large oral doses of KMS may cause vomiting, severe gastrointestinal irritation and diarrhea.
Long term - None known.

Potential Chronic Health Effect: CARCINOGENIC EFFECTS: None Known
MUTAGENIC EFFECTS: None Known
TERATOGENIC EFFECTS: None Known
REPRODUCTION EFFECTS: None Known

To the best of our knowledge, the chemical and toxicological properties of the materials in this product have not been thoroughly investigated.

Section IV. First Aid Measures

Eye Contact: Check for and remove any contact lenses. Immediately flush eyes thoroughly with copious amounts of running water, holding eyelids open, for at least 15 minutes. If discomfort or irritation persists, seek medical attention.

Skin Contact: Remove any contaminated clothing, wash exposed area thoroughly with soap or mild detergent and copious amounts of running water.

Inhalation: No information.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. DO NOT induce vomiting. If conscious, allow the victim to rinse his/her mouth, then drink 2-4 cups of water or milk and seek medical advice

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Section V. Fire and Explosion Data

This Product Is:	Non-flammable.
Auto-Ignition Temperature:	Not applicable.
Flash Point:	Not applicable.
Flammable Limits (LEL, UEL):	Not applicable.
Products of Combustion:	Will not support combustion. When subjected to temperatures above 1,000°F it may release small amounts of sulfur oxides.
Fire Hazards in Presence of Various Substances:	Not applicable.
Explosion Hazards in Presence of Various Substances:	Risk of explosion of the product in presence of mechanical impact: Not applicable. Risk of explosion of the product in presence of static discharge: Not applicable.
Fire Fighting Media and Instructions:	Not applicable.
Special Remarks on Fire Hazards:	Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent inhalation of thermal decomposition products when fighting fires involving this product.
Special Remarks on Explosion Hazards:	Not available.

Section VI. Accidental Release Measures

Spills:	KMS is used as a plant food. However, large spills can kill vegetation. If uncontaminated sweep up or collect, and reuse as product. If contaminated with other materials collect in suitable containers.
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Section VII. Handling and Storage

Precautions:	DO NOT ingest. DO NOT breath dust. Avoid generating dust during handling and promote personal hygiene among workers.
Storage:	Store in a dry location away from incompatible substances, such as strong acids and intense heat.

Section VIII. Exposure Controls/Personal Protection

Exposure Limit:	There are currently no established OSHA Permissible Exposure Limits (PELs) or ACGIH Threshold Limit Values (TLVs) for these materials. We recommend using either the OSHA PEL for nuisance dusts (i.e., 15 mg/m ³) or the ACGIH TLV for nuisance dusts (10 mg/m ³), and the OSHA PEL for respirable dust (i.e, 5 mg/m ³) as eight hour time weighted averages.
Ventilation:	Local exhaust or other ventilation that will reduce dust concentrations to less than the recommended exposure limit.
Clothing:	Wear appropriate clothing to prevent repeated or prolonged skin contact. Gloves are recommended.
Eye Protection:	If high dust concentrations exist, tight-fitting goggles are recommended to reduce dust exposure to the eyes.
Respirator Protection:	If dust concentrates exceed recommended exposure limit, use NIOSH approved dust respirators, until feasible engineering controls are completed.

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Section IX Physical and Chemical Properties

Physical (State & Appearance):	Solid	Odor:	Odorless
Molecular Weight:	415	Taste:	Saline
pH (5% soln/water):	7.04	Color:	White to Tan
Boiling Point:	Not available.		
Melting Point:	927°C (1700°F)		
Critical Temperature:	Not available.		
Specific Gravity:	2.83 (Water - 1)		
Vapor Pressure:	Not available.		
Vapor Density:	Not available.		
Volatility:	Not available.		
Odor Threshold:	Not available		
Water/Oil Dist. Coeff.	Not available.		
Toxicity (in Water):	Not available.		
Dispersion Properties:	See solubility in water.		
Solubility (in water):	24.4% at 77°F		
Bulk Density:	loose - 83 - 94 lbs/ft ³		

Section X. Composition and Information on Ingredients

Stability:	This product is stable.
Instability Temperature:	Not available.
Conditions of Instability:	No additional remarks.
Incompatibility with various substances:	(Material to avoid) - None
Corrosivity:	Similar to salt. Mildly corrosive to metals in the presence of moisture.
Special Remarks on Reactivity:	No additional remarks.
Special Remarks on Corrosivity:	No additional remarks.

Section XI. Toxicological Information

Routes of Entry:	Ingestion. Inhalation. Skin Contact.
Toxicity to Animals:	Not available.
Chronic Effects on Humans:	There are no ingredients in this product above 0.1% which are identified as carcinogens by NTP, IARC, or OSHA.
Other Toxic Effects on Humans:	As shipped this product does not present special health hazards. Conditions and work practices which generate dust or fumes should be avoided or controlled. Dust from this product is considered a "nuisance" dust and may cause irritation to skin, eyes, and respiratory tract.
Special Remarks on Toxicity to Animals:	No additional remarks.
Special Remarks on Chronic Effects on Humans:	No additional remarks.
Special Remarks on Other Toxic Effects on Humans:	No additional remarks.

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Section XII. Ecological Information

Ecotoxicity: None known.

BODS and COD: None known.

Products of Biodegradation: None known.

Toxicity of the Products of Biodegradation: None known.

Special Remarks on Environment: No additional remarks.

Section XIII. Disposal Considerations

Waste Disposal: Uncontaminated material can generally be disposed of by burial in an approved land disposal facility, in accordance with applicable federal, state, and local regulations. Depending upon type and extent of contamination, if any, other disposal methods may be required by environmental regulatory agencies.

Section XIV. Transport Information

DOT Classification: Not regulated by DOT

Section XV. Ecological Information

Other Regulations: The product is not listed as a dangerous or hazardous material.

Other Classifications: WHMIS (CDN) The product is not controlled under WHMIS (Canada)
 HCS (U.S.A.) Although there is insufficient scientific test data to determine if this material is regulated at this time, due to its similarity to potassium sulfate and magnesium sulfate (i.e. Epsom Salts), we recommend that it be treated as an irritant under HCS.
 DSCL (EEC) Not controlled under DSCL (Europe).

Hazardous Material	Health Hazard 1
Identification System	Fire Hazard 0
(NPCA. - U.S.A.)	Reactivity 0
	Personal Protection C
National Fire Protection Association (U.S.A.)	<p>Health: 1, Fire Hazard: 0, Reactivity: 0, Specific Hazard: 0</p>

WHMIS (CDN) (Pictograms)		DOT (U.S.A.) (Pictograms)	
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Protective Equipment (Pictograms)				
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Section XVI. Other Information

The information in this MSDS was obtained from sources which we believe are accurate and reliable. However, this information is provided without any representation or warranty expressed or implied, regarding the accuracy or correctness, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.