### SECTION 1  
**PRODUCT AND COMPANY IDENTIFICATION**

<table>
<thead>
<tr>
<th>Trade Name:</th>
<th>K-Mag®, all grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name:</td>
<td>Potassium Magnesium Sulfate</td>
</tr>
<tr>
<td>CAS Number:</td>
<td>14977-37-8</td>
</tr>
<tr>
<td>Chemical Family:</td>
<td>Inorganic Salt</td>
</tr>
</tbody>
</table>
| Synonyms: | Potassium Magnesium Sulfate  
SPM  
Langbeinite  
Sulfate of Potash Magnesia |
| Primary Use: | Crop nutrient |
| Company Information: | THE MOSAIC COMPANY  
3033 Campus Drive  
Plymouth, MN 55441  
www.mosaicco.com  
800-918-8270 or 763-577-2700 8 AM to 5 PM Central Time US |
| Emergency Telephone: | **EMERGENCY OVERVIEW**  
24 Hour Emergency Telephone Number:  
For Chemical Emergencies:  
Spill, Leak, Fire or Accident  
Call CHEMTREC  
North America: (800) 424-9300 (reference CCN201871)  
Others: (703) 527-3887 (collect) |

### SECTION 2  
**HAZARD IDENTIFICATION**

<table>
<thead>
<tr>
<th>GHS Classification:</th>
<th>Not Applicable</th>
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<tr>
<td><strong>Signal Word:</strong></td>
<td>not applicable</td>
</tr>
<tr>
<td><strong>Hazard Statement(s):</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Label Elements:</strong></td>
<td></td>
</tr>
<tr>
<td>Prevention:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Response:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Storage:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Disposal:</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Other Hazards which do not require classification:</strong></td>
<td>Handling and/or processing of this material may generate dust which can cause mechanical irritation of the eyes, skin, nose and throat.</td>
</tr>
</tbody>
</table>

### SECTION 3  
**COMPOSITION INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>Formula:</th>
<th>K₂SO₄ · 2MgSO₄</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition:</td>
<td></td>
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</tbody>
</table>
Potassium Magnesium Sulfate  
(Langbeinite)  
Sodium Chloride |
| CAS Number: |  
14977-37-8  
7647-14-5 |
| **% by Weight:** |  
94.5-99.5%  
0.5-2.0% |
SECTION 4  FIRST AID MEASURES

First Aid Procedures:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes:</td>
<td>Move victim away from exposure and into fresh air. Flush eyes with plenty of clean water for at least 15 minutes. If symptoms persist, seek medical attention.</td>
</tr>
<tr>
<td>Skin:</td>
<td>Wash contaminated area thoroughly with mild soap and water. If chemical or solution soaks through clothing, remove clothing and wash contaminated skin. If irritation develops and persists after washing, seek medical attention.</td>
</tr>
<tr>
<td>Inhaled:</td>
<td>If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.</td>
</tr>
<tr>
<td>Ingestion:</td>
<td>If large amounts are swallowed, seek emergency medical attention. If possible, do not leave victim unattended and observe closely for adequacy of breathing.</td>
</tr>
</tbody>
</table>

Note to Physician: None Known

SECTION 5  FIRE FIGHTING MEASURES

Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protection of Firefighters: No unusual fire or explosion hazards are expected. Combustion can yield oxides of sulfur when heated above 1000°F (537°C).

Positive pressure, self-contained breathing apparatus is required for all firefighting activities involving hazardous materials. Full structural firefighting (bunker) gear is the minimum acceptable attire. The need for proximity, entry, flashover and/or special chemical protective clothing (see Section 8) needs to be determined for each incident by a competent firefighting safety professional.

Water used for fire suppression and cooling may become contaminated. Discharge to sewer system(s) or the environment may be restricted, requiring containment and proper disposal of water (see Section 6).

SECTION 6  ACCIDENTAL RELEASE MEASURES

Response Techniques: Stay upwind and away from spill (dust hazard). Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Notify appropriate federal, state, and local agencies as may be required (see Section 15). Minimize dust generation. Sweep up and package appropriately for disposal. Large spills can harm or kill vegetation.

SECTION 7  HANDLING AND STORAGE

Handling: The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 8). Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Wash contaminated clothing or shoes. Use good personal hygiene practices.
Storage: Use and store this material in dry, well-ventilated areas. Store only in approved containers. Keep container(s) tightly closed. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Material may absorb moisture from the air.

SECTION 8  EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use process enclosure, general dilution ventilation or local exhaust systems where necessary to maintain airborne dust concentration below the OSHA standards or in accordance with applicable regulations.

Personal Protective Equipment (PPE):

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended.

Skin: The use of cloth or leather work gloves is advised to prevent skin contact, possible irritation and absorption.

Respiratory: A NIOSH approved air purifying respirator with a type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed if workplace conditions warrant a respirator.

Other: A source of clean water should be available in the work area for flushing eyes and skin.

General Hygiene Considerations: Wash thoroughly after handling
Use adequate ventilation

Exposure Guidelines:

OSHA Permissible Exposure Limits (PEL): Particulates Not Otherwise Regulated:
5 mg/m³ TWA (respirable);
15 mg/m³ TWA (total)

ACGIH Threshold Limit Value (TLV): Particulates Not Otherwise Specified:
3 mg/m³ TWA (respirable);
10 mg/m³ TWA (inhalable)

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values in this section are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Appearance: White and pink to gray, crystalline or granular
Vapor Pressure (mm Hg): Not applicable

Odor: None
Vapor Density (air=1): Not applicable

Odor Threshold: No data available
Specific Gravity or Relative Density: 2.81 – 2.85

Physical state: Crystalline or granular solid
Bulk Density: Loose 83 - 94 lbs/ft³ (1300 - 1505 kg/m³);

pH: Approx. 7 in a 5% solution
Solubility in Water: Approximately 24.4% @ 77°F (25°C)

Melting Point/ Freezing Point: 972°C (1700°F)
Partition coefficient: No data available

Boiling Point: Not applicable
Auto-Ignition Temperature: Not applicable

Flash Point: Not applicable
Decomposition Temperature: No data available
Evaporation Rate: No data available  
Viscosity: No data available  
Flammability: Not applicable  
Volatility: Not applicable  
Upper/lower Flammability or explosive limits: Not applicable

### SECTION 10  
**STABILITY AND REACTIVITY**

- **Chemical Stability:** Stable under normal conditions of storage and handling.  
- **Conditions to Avoid:** Mildly corrosive to metals in the presence of moisture.  
- **Incompatible Materials:** Strong oxidizing agents, strong acids  
- **Hazardous Decomposition Products:** Combustion can yield oxides of sulfur when heated above 1000°F (537°C).  
- **Corrosiveness:** Mildly corrosive to metals in the presence of moisture.  
- **Hazardous Polymerization:** Will not occur

### SECTION 11  
**TOXICOLOGICAL INFORMATION**

**Substance:** Potassium Magnesium Sulfate  
**Acute Oral Toxicity:** No data available  
**Acute Inhalation Toxicity:** No data available  
**Acute Dermal Toxicity:** No data available  
**Substance:** Sodium Chloride  
**Acute Oral Toxicity:**  
- LD$_{50}$ (rat, oral) > 3000 mg/kg  
- LD$_{50}$ (mouse, oral) > 4000 mg/kg  
**Acute Inhalation Toxicity:** LC$_{50}$ (rat) > 42 g/m$^3$/1 hour  
**Acute Dermal Toxicity:** No data available  
**Mutagenesis:** No data available  
**Target Organ** No data available  
**Developmental Toxicity:** No data available  
**Carcinogenicity** No data available

### SECTION 12  
**ECOLOGICAL INFORMATION**

- Ecotoxicology: When dissolved in water, sodium chloride creates an elevated level of salinity that may be harmful to fresh water aquatic species and to plants that are not salt-tolerant.

### SECTION 13  
**DISPOSAL CONSIDERATIONS**

Recover or recycle if possible. Properly characterize all waste materials. Consult federal, state/provincial and local regulations regarding the proper disposal of this material. Prevent material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways.
### SECTION 14  TRANSPORT INFO

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Regulatory Status:</td>
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<tr>
<td>Identification Number:</td>
<td>HTS 3104.90.01</td>
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<tr>
<td>Hazard Class:</td>
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<tr>
<td>Proper Shipping Name</td>
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<tr>
<td>Packing Group</td>
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<tr>
<td>DOT Emergency Response Guide Number:</td>
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<tr>
<td>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:</td>
<td>Not applicable</td>
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<tr>
<td>MARPOL Annex V:</td>
<td>Non-HME</td>
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<tr>
<td>IMO/IMDG:</td>
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### SECTION 15  REGULATORY INFORMATION

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CERCLA:</td>
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<tr>
<td>RCRA 261.33:</td>
<td>Not listed</td>
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</table>
| SARA TITLE III:        | Section 302/304: Not listed  
Section 311/312:  
Acute: No  
Chronic: No  
Fire: No  
Pressure: No  
Reactivity: No  
Section 313: Not listed |
| NTP, IARC, OSHA:       | This material has not been identified as a carcinogen by NTP, IARC, or OSHA. |
| Canada DSL and NDSL:   | DSL: Yes  
NDSL: Not listed |
| TSCA:                  | Listed on the TSCA Inventory |
| CA Proposition 65:     | ! WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov |
| WHMIS:                 | WHMIS 2015  
This SDS has been prepared according to the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all of the information required by the HPR. |
SECTION 16 OTHER INFORMATION

Disclaimer:
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Preparation: The preparation of this SDS was in accordance with ANSI Z400.1-2010.

Revision Date: December 31, 2018
Sections Revised: 2, 10, 15
SDS Number: MOS 100042

References:
MARPOL Annex V; The Fertilizer Institute (TFI), 2003; TOXNET Tomes, Toxnet, Grant (4th Ed.), RTECS

Other Hazard Classifications:

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<tr>
<th>NFPA HAZARD CLASS</th>
<th>HMIS HAZARD CLASS</th>
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<tbody>
<tr>
<td>Health:</td>
<td>Health:</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Flammability:</td>
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<tr>
<td>Instability:</td>
<td>Physical Hazard:</td>
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<tr>
<td>Special Hazard:</td>
<td>PPE:</td>
</tr>
<tr>
<td>None</td>
<td>Section 8</td>
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</table>

WHMIS 2015 (HPR) HAZARD CLASS

| Signal Word | N/A |
| Symbol      | N/A |
| Classification | Not WHMIS Controlled |
| Hazard Statements | N/A |