SAFETY DATA SHEET

PRODUCT NAME: ALLGANIC POTASSIUM

Product Code: 133/01-US
Date of issue: July 2013
Supersedes: -

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
ALLGANIC Potassium
Potassium sulfate

Recommended uses:
Only for professional use in the formulation of fertilizer preparations and end-use as fertilizer

Supplier
SQM North America
2727 Paces Ferry Rd, Building Two, Suite 1425
Atlanta, GA 30339

Company Telephone/Fax
(770) 916 9400 / (770) 916 9404

Emergency Telephone Number
(800) 424 9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification of the chemical in accordance with 29CFR §1910.1200
Not classified as hazardous.

Label elements

Hazard pictograms None applicable
Signal word None applicable
Hazard Statements None applicable
Precautionary Statements None applicable

Other hazards None

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS No</th>
<th>EC No</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium sulfate</td>
<td>7778-80-5</td>
<td>231-915-5</td>
<td>&gt; 96%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Description of first aid measures

General information
In case of persisting adverse effects consult a physician.
Never give anything by mouth to an unconscious person or a person with cramps.

In case of inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

In case of skin contact
Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

In case of eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation occurs: Get medical advice/attention.

In case of ingestion
Rinse mouth and drink plenty of water.
Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed
The following symptoms may occur:

In case of inhalation May be irritant to the respiratory tract
In case of skin contact May cause skin irritation
In case of eye contact May cause eye irritation
In case of ingestion Ingestion of large amounts may cause: Gastrointestinal disturbances

Indication of any immediate medical attention and special treatment needed
Treat symptomatically.
5. FIRE FIGHTING MEASURES

Extinguishing media
Suitable extinguishing media: Use any suitable mean for extinguishing surrounding fire.
Unsuitable material: None, but attention should be paid to compatibility with chemicals surrounding.

Specific hazards arising from the chemical
Thermal decomposition can lead to the escape of toxic/irritating gases and vapours.
Thermal decomposition products: Sulfur oxides fumes by extreme heating.

Protective equipment and precautions for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Provide adequate ventilation. Wear personal protection equipment.

Environmental precautions
Do not allow to enter into surface water or drains. Ensure waste is collected and contained.

Methods for containment and cleaning up
Take up mechanically, placing in appropriate containers for disposal or recovery.

Other information
None

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid generation of dust. Provide adequate ventilation. Wear personal protective equipment, when required.
Do not breathe dust. Wash hands before breaks and at the end of workday.
Do not eat, drink or smoke when using this product.
Keep away from food, drink and animal feeding stuff. Good hygiene practices and housekeeping measures.

Conditions for safe storage, including any incompatibilities
Reseal carefully any opened container and set upright to avoid leakages.
Keep/store only in original container. Keep the product tightly closed in a dry, in well-ventilated and cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Occupational exposure limits
Potassium sulfate:
OSHA PEL Not Established
STEL/ceiling Not Established
ACGIH TWA Not Established (2012 TLVs® and BEIs®)
STEL/ceiling Not Established (2012 TLVs® and BEIs®)

Derived No-Effect Level (DNEL) suggested by the manufacturer

<table>
<thead>
<tr>
<th>Workers (industrial/professional):</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL Human, dermal, long term: 21.3 mg/kg bw/day (systemic)</td>
</tr>
<tr>
<td>DNEL Human, inhalation, long term: 37.6 mg/m³/day (systemic)</td>
</tr>
</tbody>
</table>

Derived No-Effect Level (DNEL) is the level of exposure to the substance above which humans should not be exposed.

Engineering controls
Containment as appropriate. Good standard of general ventilation. Effective contaminant extraction.
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Personal protective equipment
Eye / face protection
Chemical goggles.
Hand protection
Nitrile rubber gloves, suggested but not required to control risk.
Respiratory protection
Dust mask required in dusty environments or exceeding total dust limits.

Environmental exposure controls
Do not allow to enter into surface water or drains. Ensure waste is collected and contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance
Solid granular or crystalline

Colour
White (crystalline); tan (granular)

Odour
Odourless

Odour Threshold
Not applicable

Physical state
Solid

pH value
4.5 – 8.5 (5% aqueous solution)

Melting point / freezing point
1067°C / 1953°F at 1013 hPa (Literature information)

Boiling temperature / boiling range
1689°C / 3072°F at 1013 hPa (Literature information)

Flash point
Not applicable

Vapourisation rate / Evaporation rate
Non volatile

Flammability
Non flammable (Based on chemical structure)

Explosion limits (LEL, UEL)
Not applicable

Vapour pressure
Not applicable

Vapour density
No data available

Density (bulk)
1.2 - 1.5 ton (metric)/m³

Solubility
> 100 g/L at 20°C / 68°F (water)

Partition coefficient n-octanol /water
Not applicable (Based on chemical structure)

Auto Ignition temperature (AIT)
Not applicable

Decomposition temperature
Not available

Viscosity
Not applicable

Explosive properties
Not explosive (Based on chemical structure)

Oxidising properties
Not oxidising (Based on chemical structure)

Other information
None

10. STABILITY AND REACTIVITY

Reactivity
No hazardous reaction when handled and stored according to provisions.

Chemical stability
Stable under normal storage and temperature conditions.

Possibility of hazardous reactions
None identified

Conditions to avoid
None specific identified.

Incompatible materials
None identified.

Hazardous decomposition products
Sulfur oxides fumes by extreme heating
11. TOXICOLOGICAL INFORMATION

Likely routes of exposure (inhalation, ingestion, skin and eye contact)
Eye contact, skin contact and inhalation.
Exposure by ingestion is not expected to occur through normal industrial or professional use.

Symptoms related to the physical, chemical and toxicological characteristics
May be irritant to the skin, eyes and the respiratory tract. Ingestion of large amounts may cause gastrointestinal disturbances.

Information on toxicological effects from short and long term exposure

Acute toxicity
Species: Method:
Acute oral toxicity LD50: > 2000 mg/kg bw Rat. OECD Guideline 423
Acute dermal toxicity LD50: > 2000 mg/kg bw Rat. OECD Guideline 402/EU B.3

Assessment / classification:

Irritant and corrosive effects
Primary irritation to the skin
Species: Method:
EU Method B.46 (In vitro skin irritation) Not irritating Not applicable
Irritation to eyes
Species: Method:
OECD guideline 405 Not irritating Rabbit (New Zealand White)

Assessment / classification:

Respiratory or skin sensitisation
Skin sensitization
Species: Method:
OECD Guideline 429 Not sensitising Data obtained by analogy conclusion

Respiratory sensitisation
Species: Method:
OECD Guideline 429 Not sensitising Data obtained by analogy conclusion

Germ cell mutagenicity / Genotoxicity

In-vitro genotoxicity
Method:
Gene-mutations microrganisms OECD Guideline 471 negative
Gene-mutations mammalian cells OECD Guideline 476 negative

Chromosome aberrat. mammalian cells
Species: Method:
OECD Guideline 473 negative Data obtained by analogy conclusion

Reproductive toxicity

OECD guideline 422 NOAEL: ≥ 1500 mg/kg bw/day
No effects were found on reproduction parameters, neither embryotoxic or developmental effects at highest dose tested. In 90-d and one generation studies with chemically related substances, no effects on fertility were observed.

Developmental toxicity / teratogenicity

OECD guideline 422 NOAEL(development): ≥ 1500 mg/kg bw/day
No effects were found on reproduction parameters, neither embryotoxic or developmental effects at highest dose tested. In 90-d and one generation studies with chemically related substances, no effects were observed.

Assessment / classification:

Specific target organ toxicity (single exposure)

Practical experience / human evidence
No relevant effects have been described after single exposure to the substance.

Assessment / classification:

Specific target organ toxicity (repeated exposure)

OECD guideline 422 NOAEL(C): > 1500 mg/kg bw/day
No effects were observed at highest dose tested.

Equivalent or similar to OECD guideline 453 NOAEL(C): 256 mg/kg bw/day (male, rat)
Data obtained by analogy conclusion (ammonium sulphate)

Absolute spleen weights were decreased and relative liver weights were increased in high dose males.

Assessment / classification:
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Aspiration hazard
Physicochemical and toxicological data does not indicate a potential aspiration hazard.

Assessment / classification: Based on available data, the classification criteria are not met

Carcinogenicity
There is no evidence of carcinogenicity or genotoxicity with potassium sulphate. No evidence of a carcinogenic potential was observed in a study equivalent or similar to OECD guideline 453 with ammonium sulphate.

International Agency for Research on Cancer (IARC) Not listed
National Toxicology Program (NTP) Not listed
29 CFR part 1910, subpart Z Not listed

Assessment / classification: Based on available data, the classification criteria are not met

12. ECOLOGICAL INFORMATION

Ecotoxicity
Aquatic toxicity
96-h LC50 680 mg/L Fish (Pimephales promelas) (US EPA Guideline EPA/600/4-90/027)
48-h EC50 720 mg/L Daphnia magna (Big water flea). (US EPA Guideline EPA/600/4-90/027)
18-d EC50 > 100 mg/L Chlorella vulgaris (literature information)
3-h EC50 > 100 mg/L Aquatic micro-organisms Data obtained by analogy conclusion

Assessment / classification: Based on available data, the classification criteria are not met

Persistence and degradability
In aqueous solution, potassium sulphate is completely dissociated into the potassium ion (K+) and the sulfate anion (SO4^2-). Hydrolysis of potassium sulfate does not occur. Due to the inorganic nature of the substance standard testing systems are not applicable.

Bioaccumulative potential
Potassium sulphate completely dissociate in water forming potassium ions and sulfate anions. Potassium sulfate has a low potential for bioaccumulation based on physicochemical properties.

Mobility in soil
Based on the high water solubility and the ionic nature, potassium sulphate is not expected to adsorb, however, due to ion exchange process, sulfates can be retained in soil, both by incorporation into organic matter (e.g. as sulfate esters of humic acids) and adsorbed to soil particles such as hydrous iron and aluminium sesquioxides.

Other adverse effects
None specified.

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with applicable federal and state laws.

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal method in compliance with applicable regulations.

Potassium sulphate is not listed as a dangerous waste in Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

14. TRANSPORTATION INFORMATION

US DOT (49CFR part 172)
UN-No. Non dangerous good
UN Proper Shipping Name Not applicable
Hazard class Not applicable
Packing group Not applicable
Hazard label(s) Not applicable
Special marking Not applicable
Special Provision Not applicable
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**International Maritime Organization (IMDG Code)**

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<tr>
<td>Marine pollutant</td>
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<tr>
<td>Hazard label(s)</td>
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**International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA)**

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**Special handling procedure**

None

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**Other special precautions**

None

### 15. REGULATORY INFORMATION

**US Federal**

**SARA Title III Rules**

- **Section 311/312 Hazard Classes**
  - Acute Health Hazard: No
  - Chronic Health Hazard: No
  - Fire Hazard: No
  - Release of Pressure: No
  - Reactive Hazard: No

- **Section 313 Toxic Chemicals**
  - No components listed

- **Section 302 Extremely Hazardous Substances (EHS)/CERCLA Hazardous Substances**
  - No components listed

- **NFPA 704/2012: National Fire Protection Association**
  - Health: 1
  - Fire: 0
  - Instability: 0
  - Special: None

**US State Regulations**

- **California Proposition 65**
  - No components listed

**Canada**

- **Ingredient Disclosure List:**
  - No components listed

- **WHMIS Classification:**
  - Not classified

This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

**European Union**

- **Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**
  - Not classified as hazardous.
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Chemical Inventories
United States TSCA  Listed
Canada DSL  Listed
European Union (EINECS)  Listed
China (IECS)  Listed
Japan (METI)  Listed
Korea (KECI)  Listed

16. OTHER INFORMATION
This SDS complies with 29 CFR part 1910 subpart Z (2012), Canada Controlled Products Regulations (2010) and ANSI Standard Z400.1-2004
Prepared by  Regulatory Affairs Department, SQM
E-mail  product_safety@sqm.com
spn-northamerica@sqm.com
Preparation date  July 2013

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Indication of changes
New