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

Substance name	CAS No	EC No	Concentration
Potassium sulfate	7778-80-5	231-915-5	> 96%

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.

Unsuitable material for taking up: None specified

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

Workers (industrial/professional):	
DNEL Human, dermal, long term :	21.3 mg/kg bw/day (systemic)
DNEL Human, inhalation, long term:	37.6 mg/m^3/day (systemic)

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.

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)/m^3	
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
		Data obtained by analogy conclusion		
Acute dermal toxicity	LD50:	> 2000 mg/kg bw	Rat.	OECD Guideline 402/EU B.3
Assessment / classification:		Based on available data, the classification criteria are not met		

Irritant and corrosive effects		
Primary irritation to the skin	Result:	Species:
EU Method B.46 (*In vitro* skin irritation)	Not irritating	Not applicable
Irritation to eyes	Result:	Species:
OECD guideline 405	Not irritating	Rabbit (New Zealand White)
Assessment / classification:	Based on available data, the classification criteria are not met	

Respiratory or skin sensitisation	Method:	Result:
Skin sensitization	OECD Guideline 429	Not sensitising
	Data obtained by analogy conclusion	
Respiratory sensitisation	No information available.	
Assessment / classification:	Based on available data, the classification criteria are not met	

Germ cell mutagenicity / Genotoxicity		
In-vitro genotoxicity	Method:	Result:
Gene-mutations microrganisms	OECD Guideline 471	negative
Gene-mutations mammalian cells	OECD Guideline 476	negative
	Data obtained by analogy conclusion	
Chromosome aberrat. mammalian cells	OECD Guideline 473	negative
Assessment / classification:	Based on available data, the classification criteria are not met	

Reproductive toxicity

Adverse effects on reproduction

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

Specific target organ toxicity (single exposure)

Practical experience / human evidence

No relevant effects have been described after single exposure to the substance.

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

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

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) Data obtained by analogy conclusion
3-h EC50	> 100 mg/L	Aquatic micro-organisms	Conclusion obtained by structural analysis and intended use
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 (SO_4^{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 sulfate 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 aluminum 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 sulfate 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

International Maritime Organization (IMDG Code)

UN-No.	Non dangerous good
UN Proper Shipping Name	Not applicable
Hazard class	Not applicable
Packing group	Not applicable
Marine pollutant	No
Hazard label(s)	Not applicable
Special marking	Not applicable
Special Provision	Not applicable

International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA)

UN-No.	Non dangerous good
UN Proper Shipping Name	Not applicable
Hazard class	Not applicable
Packing group	Not applicable
Hazard label	Not applicable
Special marking	No

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.

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

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Preparation date	July 2013

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Indication of changes

New