

Sulfamic Acid Powder

R-0726

SDS Preparation Date (mm/dd/yyyy): 03/28/2016

Page 1 of 9

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Sulfamic Acid Powder**

Product Code(s) : R-0726

Recommended use of the chemical and restrictions on use

: Use as directed by manufacturer for purposes directly related to water testing.
Recommended restrictions: None known.

Chemical family : Pure substance

Name, address, and telephone number
of the supplier:

**Lowry & Associates, Div. of Chem-Aquascience,
Inc.**

5-1151 Gorham Street
Newmarket, ON, Canada
L3Y 8Y1

Supplier's Telephone # : (905) 836-0505, Hours 09:00 to 16:30

24 Hr. Emergency Tel # : Canutec: 613-966-6666

Name, address, and telephone number of
the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Off-white powder Odorless.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:

Serious eye damage/eye irritation - Category 2A
Skin Corrosion/Irritation - Category 2

Label elements

Hazard pictogram(s)



Signal Word

WARNING!

Hazard statement(s)

Causes serious eye irritation.
Causes skin irritation.

Sulfamic Acid Powder

R-0726

SDS Preparation Date (mm/dd/yyyy): 03/28/2016

Page 2 of 9

SAFETY DATA SHEET

Precautionary statement(s)

- Wash thoroughly after handling.
- Wear protective gloves and eye/face protection.
- If on skin: Wash with plenty of water.
- If skin irritation occurs, get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
- Continue rinsing.
- If eye irritation persists: Get medical advice/attention.

Other hazards

Other hazards which do not result in classification: Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Sulfamic acid	Sulflamic acid	5329-14-6	100.00

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person. Call a physician.
- Inhalation* : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Obtain medical attention if symptoms develop and persist.
- Skin contact* : Wash with water and soap as a precaution. If irritation or symptoms develop, seek medical attention.
- Eye contact* : If in eyes: Rinse cautiously with water for several minutes. If irritation persists, seek prompt medical attention.

Most important symptoms and effects, both acute and delayed

- : Causes skin irritation. Symptoms may include redness, edema, drying defatting and cracking of the skin. Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

- : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

- : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Burning may produce irritating, toxic and obnoxious fumes.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Sulfamic Acid Powder

R-0726

SDS Preparation Date (mm/dd/yyyy): 03/28/2016

Page 3 of 9

SAFETY DATA SHEET

Hazardous combustion products

: Sulfur oxide; Ammonia; Sulfuric acid.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Wear suitable protective equipment. Refer to protective measures listed in sections 7 and 8. Restrict access to area until completion of clean-up.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

Methods and material for containment and cleaning up

: Stop spill or leak at source if safely possible. Sweep up and shovel into suitable containers for disposal.

Special spill response procedures

: Contact appropriate local and provincial environmental authorities for assistance and/or reporting requirements.
 US CERCLA Reportable quantity (RQ): None.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Avoid contact with eyes, skin and clothing. Keep away from incompatibles. Keep containers tightly closed when not in use. Wash thoroughly after handling. Avoid breathing dust and fume.

Conditions for safe storage : Store in a cool, dry, well-ventilated area. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.

Incompatible materials : Strong alkalis ;Metal compounds

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Sulfamic acid	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

: Use in a well-ventilated area. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection

: Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust and/or fumes). Advice should be sought from respiratory protection specialists.

Skin protection

: Wear protective gloves. Advice should be sought from glove suppliers.

Sulfamic Acid Powder

R-0726

SDS Preparation Date (mm/dd/yyyy): 03/28/2016

Page 4 of 9

SAFETY DATA SHEET

- Eye / face protection** : Wear eye/face protection. Chemical goggles must be worn to prevent dusts from entering the eyes.
- Other protective equipment** : Wear sufficient clothing to prevent skin contact. Depending on conditions of use, an impervious apron should be worn. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Avoid contact with skin, eyes and clothing. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : Off-white powder.
- Odour** : Odorless
- Odour threshold** : N/Av
- pH** : Not available.
- Melting/Freezing point** : 205°C (401°F)
- Initial boiling point and boiling range** : Not applicable.
- Flash point** : Not Applicable (Does not burn)
- Flashpoint (Method)** : N/Av
- Evaporation rate (BuAe = 1)** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Lower flammable limit (% by vol.)** : N/Av
- Upper flammable limit (% by vol.)** : N/Av
- Oxidizing properties** : Not applicable
- Explosive properties** : Not applicable.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density / Specific gravity** : 2.14
- Solubility in water** : Soluble.
- Other solubility(ies)** : Not available.
- Partition coefficient: n-octanol/water or Coefficient of water/oil distribution** : N/Av
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Volatiles (% by weight)** : Not available.
- Volatile organic Compounds (VOC's)** : N/Av
- Absolute pressure of container** : N/Av
- Flame projection length** : N/Av
- Other physical/chemical comments** : None known or reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

- Reactivity** : This product is not reactive.

Sulfamic Acid Powder

R-0726

SDS Preparation Date (mm/dd/yyyy): 03/28/2016

Page 5 of 9

SAFETY DATA SHEET

- Chemical stability** : Material is stable under normal conditions.
Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.
Conditions to avoid : Avoid contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials : Strong alkalis ;Metal compounds
Hazardous decomposition products : None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

- Routes of entry inhalation** : YES
Routes of entry skin & eye : YES
Routes of entry Ingestion : YES
Routes of exposure skin absorption : NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : May cause respiratory irritation. Symptoms may include sore throat, running nose and shortness of breath.

Sign and symptoms ingestion

- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin

- : Causes skin irritation. Symptoms may include redness, edema, drying defatting and cracking of the skin.

Sign and symptoms eyes

- : Causes severe eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis.

Potential Chronic Health Effects

- : Frequent or prolonged contact may dry the skin, leading to discomfort and dermatitis.

Mutagenicity

- : Not expected to be mutagenic in humans.

Carcinogenicity

- : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

- : Not expected to cause reproductive effects.

Sensitization to material

- : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects

- : This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Medical conditions aggravated by overexposure

- : None known.

Synergistic materials

- : Not available.

Toxicological data

- : See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Sulfamic acid	N/Av	3160 mg/kg	>2000 mg/kg (No mortality)

Sulfamic Acid Powder

R-0726

SDS Preparation Date (mm/dd/yyyy): 03/28/2016

Page 6 of 9

SAFETY DATA SHEET

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Not classified for hazards to the environment. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Sulfamic acid	5329-14-6	70.3 mg/L (Fathead minnow)	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Sulfamic acid	5329-14-6	71.6mg/L (Daphnia magna)	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Sulfamic acid	5329-14-6	48mg/L (Green algae)	N/Av	None.

Persistence and degradability

: Biodegradation is not applicable to inorganic substances.

Bioaccumulation potential

: Not available.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Sulfamic acid (CAS 5329-14-6)	N/Av	N/Av

Mobility in soil : High water solubility indicates a high mobility in soil.

Other Adverse Environmental effects

: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Methods of Disposal

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

Sulfamic Acid Powder

R-0726



SDS Preparation Date (mm/dd/yyyy): 03/28/2016

Page 7 of 9

SAFETY DATA SHEET

RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None.	Not regulated.	not regulated	none	
49CFR/DOT Additional information	None.				
TDG	None.	Not regulated.	Not regulated	none	
TDG Additional information	None.				

Special precautions for user : None known or reported by the manufacturer.

Environmental hazards : This substance does not meet the criteria for an environmentally hazardous substance according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

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

: Not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Sulfamic acid	5329-14-6	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Acute Health Hazard Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

Sulfamic Acid Powder

R-0726

SDS Preparation Date (mm/dd/yyyy): 03/28/2016

Page 8 of 9

SAFETY DATA SHEET

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Sulfamic acid	5329-14-6	No	N/Ap	No	No	No	Yes	No	No

Canadian Information:

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Sulfamic acid	5329-14-6	226-218-8	Present	Present	(1)-402	KE-32336	Present	HSR001549

SECTION 16. OTHER INFORMATION

Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CSA: Canadian Standards Association
- DOT: Department of Transportation
- EPA: Environmental Protection Agency
- HMIS: Hazardous Materials Identification System
- HSDB: Hazardous Substances Data Bank
- IARC: International Agency for Research on Cancer
- Inh: Inhalation
- LC: Lethal Concentration
- LD: Lethal Dose
- MN: Minnesota
- N/Ap: Not Applicable
- N/Av: Not Available
- NFPA: National Fire Protection Association
- NIOSH: National Institute of Occupational Safety and Health
- NJ: New Jersey
- NTP: National Toxicology Program
- OECD: Organisation for Economic Co-operation and Development
- OSHA: Occupational Safety and Health Administration
- PA: Pennsylvania
- PEL: Permissible exposure limit
- RCRA: Resource Conservation and Recovery Act
- RI: Rhode Island
- RTECS: Registry of Toxic Effects of Chemical Substances
- SARA: Superfund Amendments and Reauthorization Act

Sulfamic Acid Powder

R-0726

SDS Preparation Date (mm/dd/yyyy): 03/28/2016

Page 9 of 9

SAFETY DATA SHEET

STEL: Short Term Exposure Limit
 TLV: Threshold Limit Values
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

References


- : Material Safety Data Sheet from manufacturer
- OECD- The Global Portal to Information on Chemical Substances - eChemPortal, 2015
- Canadian Centre for Occupational Health and Safety, CCIInfoWeb Databases, 2015 (Chempendium, RTECs, HSDB, INCHEM).
- European Chemicals Agency, Classification Legislation, 2015

Preparation Date (mm/dd/yyyy)

: 03/28/2016

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p><u>Prepared for:</u> Lowry & Associates, Div. of Chem-Aquascience, Inc. 5-1151 Gorham Street Newmarket, ON L3Y 8Y1 www.lowryassociates.ca</p>	
<p><u>Prepared by:</u> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	

DISCLAIMER

This Safety Data Sheet was prepared by ICC The Compliance Center Inc using information provided by / obtained from Lowry & Associates, Div. of Chem-Aquascience, Inc. and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Lowry & Associates, Div. of Chem-Aquascience, Inc. expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc and Lowry & Associates, Div. of Chem-Aquascience, Inc.

END OF DOCUMENT