SAFETY DATA SHEET

SULPHAMIC ACID

Infosafe No.: 7EFBT
ISSUED Date : 21/02/2017
ISSUED by: JASOL NEW ZEALAND

CLASSIFIED AS HAZARDOUS

1. IDENTIFICATION

GHS Product Identifier
SULPHAMIC ACID

Product Code
2181360

Company Name
JASOL NEW ZEALAND

Address
81 Leonard Road
Mt. Wellington Auckland
1060 New Zealand

Telephone/Fax Number
Tel: +64 9 580 2105
Fax: +64 9 571 4388

Emergency phone number
0800 243 622

Emergency Contact Address
North Island:
81 Leonard Road, Mt. Wellington, Auckland 1060
Phone: +64 9 5802105
Fax: +64 9 5714388

South Island:
105 Rutherford Street, Christchurch 8023
Phone: +64 3 3844433
Fax: +64 3 3844431

(24 hour a day available)
0800 243622

E-mail Address
jasolnzorders@gwf.com.au

Recommended use of the chemical and restrictions on use
Manufacture of sodium cyclamate, manufacture of flame retardents, descaling, acid cleaning, nitrite removal, anodizing metals and electroplating.

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture
Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.
Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.

6.1D (Oral) - Substance that is acutely toxic
6.1E (Inhalation – vapours, dusts or mists) - Substance that is acutely toxic
8.1A Substance that is corrosive to metals
8.2C Substance that is corrosive to dermal tissue
8.3A Substance that is corrosive to ocular tissue
9.1C Substance that is harmful in the aquatic environment
9.3C Substance that is harmful to terrestrial vertebrates

Signal Word (s)
DANGER

Hazard Statement (s)
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H333 May be harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.
H433 Harmful to terrestrial vertebrates.

Precautionary Statement (s)
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.

Pictogram (s)
Corrosion

Precautionary statement – Prevention
P234 Keep only in original container.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P330 Rinse mouth.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.
P391 Collect spillage.

Precautionary statement – Storage
P401 Store
P405 Store locked up.
P406 Store in corrosive resistant/ container with a resistant inner liner.

Precautionary statement – Disposal
P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided. See Section 13 for disposal details.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Sulphamic acid	5329-14-6	100%

4. FIRST-AID MEASURES

Inhalation
Remove victim from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth to mouth method. Induce artificial respiration with the aid of a pocket mask equipped with a one way valve or other proper respiratory medical device. Seek medical attention.

Ingestion
Rinse mouth with water. Give water to drink provided victim is conscious. Do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position if possible) to maintain open airway and prevent aspiration. Seek immediate medical attention.

Skin
Remove contaminated clothing. Wash affected area with plenty of water and soap for at least 15 minutes. Seek medical attention. Wash clothing before reuse.

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Take care not to rinse contaminated water into the non-affected eye. consult an ophthalmologis

Advice to Doctor
Symptoms of poisoning may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.
Indication of any immediate medical attention and special treatment needed Symptoms of irritation to skin, eyes or lungs. Symptoms of exposure may include adominal pain, vomiting, diarrhea, drop in blood pressure, burning sensation, shock.

Most important symptoms/effects, acute and delayed
Irritant effects,cough,shortness of breath.
Inflammation of eye (redness, watering, itching, pain). Corneal damage. Skin inflammation (itching, scaling, reddening, pain, or occasionally, blistering). The following symptoms may occur: Pulmonary oedema; Lung irritation; Oesophagogastric injuries.

5. FIRE-FIGHTING MEASURES

Fire Fighting Measures
If safe to do so, move undamaged containers from fire area. Do NOT move cargo if cargo has been exposed to heat. Dam fire control water for later disposal. Avoid generating dust.

Suitable Extinguishing Media
In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions include Foam; Carbon dioxide (CO_2);

Hazards from Combustion Products
Generates dangerous gases or fumes in contact with : halogens, alkalines,oxidizing agents,nitrates,nitrites,nitric acid,metal and water. Fire may cause evolution of : sulphur dioxides, nitrogen oxides.

Specific Hazards Arising From The Chemical
Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources.

Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

Hazchem Code
2X

Decomposition Temperature
>=205 °C

Other Information
SPECIAL FIRE FIGHTING INSTRUCTIONS
Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

PERSONAL PROTECTION
Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Please note: Structural fire fighters uniform will provide limited protection.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures
Avoid accidents, clean up immediately. Increase ventilation. Isolate the danger area. Use clean, non-sparking tools and equipment. Shut off all possible sources of ignition. Consult an expert. Avoid generation for dust; do not inhale dusts.

Methods And Materials For Containment And Cleaning Up
Cover drains. Collect, bind, and pump off spills. Take up dry. Avoid generation of dusts. Ensure all waste is collected and treated via a waste water treatment plant.

Spills & Disposal
Stop leak if safe to do so.
Dilute with plenty of water. Neutralize. Suitable material for diluting or neutralizing: Lime; Soda ash.

Personal Precautions
Personnel involved in the clean up should wear full protective clothing as listed in section 8.

Personal Protection
Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Environmental Precautions
Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.

Other Information
Evacuate all unnecessary personnel.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product dust. Avoid prolonged or repeated exposure. Remove contaminated clothing and wash before reuse. Keep away from combustible material. Chemicals should be used only by those trained in handling potentially hazardous materials. Observe label precautions. Open and handle container with care. Measures to prevent aerosol and dust generation: Technical ventilation of workplace. Where necessary/ appropriate: Use the following local exhaust ventilation types: Receptor hood for dust.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage.

Unsuitable Materials
Store away from incompatible materials
as listed in section 10. Keep away from: Alkali, Cyanides, Oxidising Agents. Reacts violently with chlorine and fuming nitric acid causing explosion hazard. Reacts slowly with water to form ammonium bisulfate. This product has a UN classification of 2967 and a Dangerous Goods Class 8 (corrosive) according to The Australian Code for the Transport of Dangerous Goods by Road and Rail.

Other Information
SUITABLE CONTAINER
Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer. Suitable container/equipment material: Acid-resistant.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Controls, Personal Protection
The following exposure standard has been established by The Australian Safety and Compensation Council (ASCC); DNEL/DMEL and PNEC values:
DNELs (workplace):
DNEL inhalation (8 h): 7.5 mg/m3
DNELs (consumer):
DNEL oral: 1.06 mg/kg bw/day
DNEL inhalation: 1.85 mg/m3
PNECs:
PNEC aqua (freshwater): 0.3 mg/L
PNEC sediment (freshwater): 0.3 mg/kg sediment dw
PNEC aqua (marine water): 0.03 mg/L
PNEC sediment (marine water): 0.03 mg/kg sediment dw

NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. Peak limitation is a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes.
These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity

Occupational exposure limit values
No Data Available

Biological Limit Values
No information available on biological limit values for this product.

Appropriate Engineering Controls
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.
Measures to prevent aerosol and dust generation: Technical ventilation of workplace. Where necessary/ appropriate: Use the following local exhaust ventilation types: Receptor hood for dust.
Appropriate engineering controls:
Where possible/ appropriate: Closed system; Water recirculation. Neutralize any environmental emissions to water. Emissions to water: (local/municipal) sewage water treatment. Any significant emissions to air: scrubbers. Any significant emissions to water: on-site waste water treatment (chemical).

Personal Protective Equipment
RESPIRATOR: Filtering device with filter or ventilator filtering device of type: Half-face mask (EN 140): Filter-/apparatus type: P2 (AS1715/1716).
EYES: Wear goggles; Wear eye glasses with side protection according to EN 166 (AS1336/1337).
HANDS: Wear gloves: NR (natural rubber, natural latex); CR (chloroprene, chloroprene rubber); NBR (nitrile rubber); Butyl rubber (AS2161).
CLOTHING: Long-sleeved protective coveralls and safety footwear (AS3765/2210).

Individual protection measures
Protective cloting needs to be selected specifically for the workplace, depending on concentration and quantities of the hazardous subtances handled. The chemical resistance of the equipment should be enquired at the respective supplier.
Full contact :
Glove material : Nitrile rubber
Glove thickness : 0.11 mm
Break through time : > 480 min
splash contact :
Glove material : Nitrile rubber
Glove thickness : 0.11 mm
Break through time : > 480 min

Hygiene Measures
Immediately change contaminated clothing.Apply preventive skin protection.Wash hand and face after working with substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form
Solid

Appearance
Crystal

Colour
White or colorless

Odour
Odourless

Decomposition Temperature
>=205 °C

Melting Point
Decomposes

Freezing Point
No Data Available

Boiling Point
Decomposes

Solubility in Water
213 g/L°C

Specific Gravity
No data available

pH
pH (1% solution)= 1.18 1% at 25°C
pH (as supplied)= Not available

Vapour Pressure
0.0078 hPa

Vapour Density (Air=1)
3.35

Evaporation Rate
No Data Available

Viscosity
Not available

Volatile Component
Not Available

Flash Point
No Data Available

Auto-Ignition Temperature
No Data Available

Explosion Limit - Upper
19

Explosion Limit - Lower
3.5

Relative density
2.13 g/cm3 Relative

10. STABILITY AND REACTIVITY

Reactivity
Reacts violently with bases and is corrosive. Reacts violently with chlorine and fuming nitric acid causing explosion hazard. Reaction with: Alkali; Amines; Ammonia; Chlorine; Hydrochloric acid; Sulfuric acid; Oxidising agents, strong; Nitrogen oxides (NOx).

Chemical Stability
Stable. Slow hydrolysis to ammonium bisulphate. Decomposition temperature: 205 deg C.

Conditions to Avoid
Strong Heating

Incompatible materials
For incompatible materials - refer to Section 7 - Handling and Storage.

Hazardous Decomposition Products
Generates dangerous gases or fumes in contact with : halogens, alkalines,oxidizing agents,nitrates,nitrites,nitric acid,metal and water. Thermal decomposition can lead to the escape of irritating gases and vapours. Fire may cause evolution of : sulphur dioxides, nitrogen oxides

Hazardous Polymerization
No Data Available

Other Information
MATERIALS TO AVOID:
Strong oxidizers, Nitric Acid, Chlorine. Solutions are strong acids and react violently with bases.

KEEP AWAY FROM:
Alkali, Cyanides, Oxidising Agents. Reacts violently with chlorine and fuming nitric acid causing explosion hazard

11. TOXICOLOGICAL INFORMATION

Toxicology Information
Acute oral toxicity LD50 Rat: 3160 mg/kg bw
Acute oral toxicity: LD50 rat: > 2.000 mg/kg Method: (OECD 401)
LD50Rat: . 1600 mg/kg bw
LD50 Rat: > 2000 mg/kg bw
LDLo Guinea Pig: 1050 mg/kg bw
Acute oral toxicity: LD50 rat: > 2.000 mg/kg (OECD 401)
Rabbit Skin: irritation (OECD test guideline 404)
Rabbit Eye: Severe irritation (OECD test guideline 405)
Genotoxicity in vitro
Mutagenicity (mammal cell test) : micronucleus: Negative (OECD test guideline 474)
Ames test Salmonella typhimurium: negative (OECD test guideline 471)
Specific target organ toxicity ..single exposure: The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ ..repeated exposure: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard: No aspiration toxicity classification.
Repeated dose oral toxicity
NOAEL : 1000 90-day rat
NOAEL: 250 (nominal) 90-day rat read-across : ammonium sulfamate
NOAEL : 500, LOAEL : 1000; 105-day rat read-across : ammonium sulfamate
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):
Ames in vitro with and without Metabolic activation: negative
Bacterial DNA-repair in vitro with and without Metabolic activation: negative
Micronucleus in vivo with and without Metabolic activation: negative
Reproduction oral toxicity
NOAEL: 25 3-generation rat read-across : ammonium sulfamate
Fertility oral toxicity NOAEL: 150 2 x 10-day Quail read-across : ammonium sulfamate

Ingestion
Irritations of mucous membranes in the mouth,pharynx,esophagus and gastrointestinal tract. Swallowing or vomiting of the product may result in aspiration hazard.

Inhalation
Symptoms : cough,shortness of breath,irritation symptoms in the respiratory tract. The following symptoms may occur: Pulmonary oedema; Lung irritation; Oesophagogastric injuries. Irritating to lungs. The aerosol is corrosive to the respiratory tract. Serious potential effects.

Skin
Irritating to skin. Skin inflammation (itching, scaling, reddening, pain, or occasionally, blistering). Irritating to skin. The aerosol is corrosive to the skin. Serious potential effects.

Eye
Causes eye irritation. Inflammation of eye (redness, watering, itching, pain). Corneal damage. Irritating to eyes. The aerosol is corrosive to the eyes. Serious potential effects.

Carcinogenicity
Carcinogen Category 0

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxicity to fish LC50 pimephales promelas (fathead minnow): 70,3 mg/l/96h
Toxicity to bacteria EC10 Pseudomonas putida: >= 1.000 mg/l/16h (IUCLID)
Acute fish toxicity LC50 : 70 mg/L 96h Fathead minnow pH effects
LC50 > 2000 mg/L 24h Guppy neutralised exposure
LC50 : 670 mg/L Japanese barbell read-across : ammonium sulfamate
LC50 : 203 mg/L 96h Catfish (fingerlings) read-across :ammonium sulfamate
LC50 : 650 mg/L 96h Cherry salmon yamame trout (fingerlings) read-across :ammonium sulfamate
Long-term fish toxicity
LC50 : 630 mg/L 10d Japanes barbell read-across :ammonium sulfamate
NOEC : 30 mg/L 7wk Rainbow trout read-across :ammonium sulfamate
Acute algae toxicity IC50 >> 29 mg/L 72h Green algae neutralised exposure
Sewage sludge studies
EC10 > 1000 mg/L 16h Bacteria neutralised exposure
EC10 > 1000 mg/L 24h Sludge neutralised exposure
Other ecotoxicity studies
LC50 : 680 mg/L 96h Caddisfly read-across :ammonium sulfamate
LC50 : 560 mg/L 10d Caddisfly read-across :ammonium sulfamate
LC50 : 2650 mg/L 96h Aquatic sowbug read-across :ammonium sulfamate

Persistence and degradability
Persistent

Mobility
High

Environmental Fate
Do NOT let product reach waterways, drains and sewers. The following applied to nitrates in general: Hazard for drinking water.

Biological effects : Harmful effect due to pH shift. Acidic properties. The solution in water is a strong acid.

Bioaccumulative Potential
(Lit.) Bioaccumulation is not expected (log Pow <1). Negligible.

Environmental Protection
No Data Available

13. DISPOSAL CONSIDERATIONS

Waste Disposal
Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.

Special precautions for landfill or incineration
Contact a specialist disposal company or the local waste regulator for advice. Incinerate at an approved site following all local regulations. This material may be suitable for approved landfill.

14. TRANSPORT INFORMATION

U.N. Number
2967

UN proper shipping name
SULPHAMIC ACID

Transport hazard class(es)
8

Sub.Risk
No data available

Packing Group
III

Hazchem Code
2X

IERG Number
37

UN Number (Sea Transport)
2967

UN Number (Road Transport)
2967

UN Number (Air Transport, ICAO)
2967

IATA/ICAO Hazard Class
8

IATA/ICAO Packing Group
III

IATA/ICAO Sub Risk
No data available

IMDG UN No
2967

IMDG Hazard Class
8

IMDG Pack. Group
III

IMDG Subsidiary Risk
No data available

IMDG Marine pollutant
No

IMDG EMS
FA, SB

15. REGULATORY INFORMATION

National and or International Regulatory Information
No Data Available

HSNO Approval Number
HSR001549

Other Information
Specific advice on controls required for materials used in New Zealand can be found at http://www.epa.govt.nz/hazardous-substances/approvals/Pages/default.aspx.

16. OTHER INFORMATION

Date of preparation or last revision of SDS
21/02/2017

Technical Contact Numbers
24 Hour Emergency Contact: 0800 CHEMCALL (0800 243 622)
New Zealand Poisons Information Centre: 0800 POISON (0800 764 766)
New Zealand Emergency Services: 111

Other Information
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.
This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Jasol NZ cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.
If clarification or further information is needed, the user should contact their Jasol NZ representative or Jasol NZ at the contact details on page 1.
Jasol NZ's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

END OF SDS