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Timuraya Tunggal, pt
Chemicals & Fertilizers

1. Identification of the substance/mixture

1.1. Product identifier
Product name : Sulfamic Acid
Chemical family : Inorganic Acid

1.2. Relevant identified uses of the substance or mixture and advised against
Identified uses : Manufacture of sodium cyclamate, manufacture of flame retardents, descaling, acid cleaning, nitrite removal, anodizing metals and electroplating.

2. Hazard Identification

2.1. Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)
Skin irritation : category 2, H315
Eye irritation : category 2, H319
Chronic aquatic : category 3, H412
For the full text of the H-Statements mentioned in this section, see section 16.

Classification (67/548/EEC or 1999/45/EC)
Xi;R36/38
R52/53
For the full text of the R-phrases mentioned in this section, see section 16.

2.2. Label elements
Labelling (REGULATION (EC) No.1272/2008)

Hazard pictograms

Signal word
Warning

Hazard statements
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P273 Avoid release to the environment.
P305 + P351 + P338 If in eyes : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P352 If on skin : Wash with plenty of soap and water.

Labelling (67/548/EEC or 1999/45/EC)

Symbols(s)	Xi	Irritant
R-phrase(s)	36/38-52/53	Irritating to eyes and skin. Harmful to aquatic organisms,may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	26-28-61	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water. Avoid release to the environment. Refer to special instructions/ safety data sheets.

2.3. Other hazards
None known.

3. Composition / information on ingredients

Formula : H_2NSO_3H H_3NO_3S (Hill)
CAS No. : 5329-14-6
EC No. : 226-218-8
Molar mass : 97.09 g/mol

Hazardous components (1999/45/EC)

Chemical Name (concentration)

CAS No.	EC No.	Classification
5329-14-6	226-218-8	Xi ; R36/38 R52-53

4. First aid measures

4.1. Description of first aid measures
After inhalation : fresh air
After skin contact : wash off with plenty of water. Remove contaminated clothing.
After eye contact : rinse out with plenty of water. Call in opthalmologist.
After swallowing : immediately make victim drink water (drink a lot of water). Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed: irritant effects,cough,shortness of breath.

4.3. Indication of immediate medical attention and special treatment needed: No information available

5. Fire-fighting measures

5.1. Extinguishing media
Suitable extinguishing media: use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given

5.2. Special hazards arising from the substance or mixture
No combustible. Ambient fire may liberate hazardous vapours.
Fire may cause evolution of : sulphur dioxides, nitrogen oxides.

5.3. Advice for fire fighters
Special protective equipment for fire fighters : stay in danger area only with self contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing protective clothing.

6. Accidental release measures

6.1. Personal precaution, protective equipment and emergency procedures.
Advice for non emergency personnel : Avoid generation for dust; do not inhale dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area,observe emergency procedures, consult an expert.

6.2. Environmental precautions
Do not empty in to drains

6.3. Methods and material for containment and cleaning up
Cover drains. Collect, bind, and pump off spills
Observe possible material restrictions (see sections 7.2 and 10.5)
Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4. Reference to the other sections
Indication about waste treatment see section 13.

7. Handling and storage

7.1. Precaution for safe handling
Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities
Tightly closed. Dry.

7.3. Specific end uses.
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls
Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment
See section 7.1.

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.

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

Eye / face protection
Safety glasses
Hand protection
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

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

Other protective equipment:
Protective clothing

Respiratory protectition
Required when dust are generated.
Recommended filter type : Filter B-(P2)

Environmental exposure controls
Do not empty into drains.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	crystals
Colour	white
Odour	odourless

pH(1% solution, 25°C)	1,18
Melting point	205 °C (decomposition)
Boiling point	Decomposes.
Flash point	Not relevant.
Evaporation rate	No information available.
Flammability (solid,gas)	Non flammable.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	0,0078 hPa
Relative vapour density	3,35
Relative density	2,13 g/cm^3 at 20 °C
Water solubility	213 g/l at 20 °C
Partition coefficient: n-Octanol/water	log Pow: 0,10 Method: (experimental) (Lit.) Bioaccumulation is not expected (log Pow <1).
Autoignition temperature	No information available.
Decomposition temperature	209 °C
Viscosity, dynamic	No information available.
Explosive properties	Non explosive
Oxidizing properties	Not oxidizing.

9.2. Other data

Bulk density	~ 1,300 kg/m^3

10. Stability and reactivity

10.1. Reactivity
Dangerous reactions are not expected handling the product according to its intented use.

10.2. Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions
Generates dangerous gases or fumes in contact with : halogens, alkalines,oxidizing agents,nitrates,nitrites,nitric acid,metal and water.

10.4. Conditions to avoid
Strong heating.

10.5. Incompatible materials
Strong oxidizers, Nitric Acid, Chlorine. Solutions are strong acids and react violently with bases.

10.6. Hazardous decomposition products
In the event of fire, see chapter 5.

11. Toxicological information

11.1. Information on toxicological effects
Acute oral toxicity

LD_{50} rat
Dose : > 2.000 mg/kg
Method : (OECD 401)
Symptoms : irritations of mucous membranes in the mouth,pharynx,oesophagus and gastrointestinal tract.

Acute inhalation toxicity
Symptoms : cough,shortness of breath,irritation symptoms in the respiratory tract.

Skin irritation
Rabbit
Result : irritations.
Method : OECD test guideline 404

Eye irritation
Rabbit
Result : severe irritation.
Method : OECD test guideline 405

Genotoxicity in vitro
Mutagenicity (mammal cell test) : micronucleus
Result : negative
Method : OECD test guideline 474

Ames test
Salmonella typhimurium
Result : negative
Method : 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.

11.2. Further information
Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

12.1. Toxicity

Toxicity to fish

LC_{50}

Species : pimephales promelas (fathead minnow)

Dose : 70,3 mg/l

Exposure time : 96 h

Method : OECD test guideline 203

Toxicity to bacteria

EC_{10}

Species: Pseudomonas putida

Dose: >= 1.000 mg/l

Exposure time: 16 h

(IUCLID)

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

Partition coefficient : n-octanol/water

log Pow : 0,10

Method : (experimental)

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

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6. Other adverse effects.

Additional ecological information

Biological effects : Harmful effect due to pH shift.

Further information on ecology : Do not allow to run into surface waters, wastewater, or soil.

13. Disposal considerations

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.

14. Transport information

ADR/RID
UN 2967 Sulphamic Acid , 8, III

IATA
UN 2967 Sulphamic Acid, 8, III

IMDG
UN 2967 Sulphamic Acid, 8, III
EmS F-A S-B

The transport regulations are cited according to international regulations. Possible national deviations in other countries are not considered.

15. Regulatory information

15.1. Safety, health and environmental regulation/legislation specific for the substance or mixture

EU regulations

Major accident hazard	96/82/EC
Legislation	Directive 96/82/EC does not apply
Occupational restrictions	Take note of Dir 94/33/EC on the protection of young people at work.

15.2. Chemical safety assessment
For this product a chemical safety assessment was not carried out.

16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

Full text of R-phrases referred to under sections 2 and 3.

R36/38	Irritating to eyes and skin.
R52	Harmful to aquatic organisms.
R52/53	Harmful to aquatic organisms,may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.

Training advice
Provide adequate information, instruction and training for operators.

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The information accumulated here in is believed to be accurate but is not warranted to be whether originating with the company or not.

Health and safety data sheet should be used only as a guide to the safe handling of the product, and is not intended as a technical specification.

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