

Safety Data Sheet



1. Identification of the Substance/Mixture and the Supplier

Supplier : National Institute of Advanced Industrial Science and Technology (AIST)
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Prepared on : July 13, 2009,
 Revised on : November 13, 2017

Reference No : 3004001

Identity of Substance/Mixture : Certified reference material: NMIJ CRM 3004-a
 Amidosulfuric Acid
 Recommended Use of the Chemical and Restriction on Use : This CRM can be used for the primary standard in titrimetric analysis. This reference material can also be used as standard in quantification of nitrogen in elemental analysis Do not use this reference material for other purposes than testing/research.

2. Hazards Identification

GHS Classification: Skin corrosion/irritation : Hazard Category 2 (315)
 Serious Eye Damage/ Eye Irritation : Hazard Category 2 (H319)
 Water environment toxicity (Prolonged) : Hazard Category 3 (H412)

GHS Label Element:



Signal Word: Warning
 Hazard and toxicity : [Major hazardous toxicity]
 Corrosivity
 [Toxicity]
 Cause skin irritation
 Cause serious eye irritation
 Harmful to aquatic life with long lasting effects
 Strong corrosivity causes chemical burn. Inhaling dust irritates respiratory tract and may cause bronchial asthma, coughing, chest

Precautionary statement	<p>pain, pulmonary edema, etc. Oral intake causes burning sensation in the mouth, and affects mucous membrane of esophagus, digestive organ, etc. High concentration lethal. Dermal absorption causes similar symptoms.</p> <p>[Physical and chemical hazards] Violent exoergic reaction in contact with alkali</p> <p>[Preventive measures] Use appropriate protective equipment such as protective globes. Use local exhaust ventilation when handling indoor. Wash hands, face, etc. well and gargle after the handling. Do not eat, drink or smoke when handling this product. Avoid release to the environment.</p> <p>[Response] If swallowed : Take a large amount of milk or water. Do not force vomiting. When vomited, take sodium bicarbonate water. Get medical treatment immediately. 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.. If inhaled : Move to get some fresh air and rest, keep the body warm with a blanket, and get medical treatment If on skin : Rinse with a large amount of water using soap. When some symptoms appear, get medical assistance as need arises. Remove/take off contaminated clothing. Wash contaminated clothing before reuse.</p> <p>[Storage] Avoid direct sunlight, store in an airtight container at well ventilated cool place.</p> <p>[Disposal] Outsource to a professional industrial waste disposal contractor licensed by a prefectural governor.</p> <p>The other hazards than the above do not result in classification or are not classifiable.</p>
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3. Composition/Information on Ingredients

Substance or mixture	: Single product
Chemical name	: Amidosulfuric acid
Other name	: Sulphamic acid
Chemical formula or structural formula	: HOSO_2NH_2
Mass fraction(%)	: 99.9 % and over
Molecular weight	: 97.09
Reference Number in	: Act on the Evaluation of Chemical Substance and Regulation of

Gazetted List in Japan : Their Manufacturer : (1) – 402
Industrial Safety and Health Act : Published
CAS No. : 5329-14-6
Hazardous component : Amidosulfuric acid

4. First-aid Measures

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.

If on skin : Rinse with a large amount of water using soap. When start having symptoms, get medical assistance as necessary. Remove/take off contaminated clothing. Wash contaminated clothing before reuse.

If inhaled : Move to get some fresh air and rest, get medical treatment. Keep the body warm with a blanket, etc.

If swallowed : Take a large amount of milk or water. Do not force vomiting. When vomited, take sodium bicarbonate water. Get medical treatment immediately.

Most important symptoms and effects, both acute and delayed : Irritant effects, Cough, Shortness of breath, Pain, shock, Nausea.

Measures to be taken to protect the person applying first aid : Use personal protective equipment.

5. Fire-fighting Measures

Extinguishing media : The material being non-flammable, use appropriate extinguishing media compatible with the surrounding,

Specific hazards at the time of fire : Use appropriate protective equipment to protect from inhaling irritating and toxic smoke, fume or gas formed due to a fire.

Specific extinguishing measure : Transfer a movable container to a safe place promptly. If impossible to transfer, use water spray to cool the container and the periphery

Protecting fire-fighting personnel : Extinguishing activities on windward side, and avoid inhaling toxic gases
Use protective equipment such as air-breathing apparatus, etc.

6. Accidental Release Measures

Personal precaution : If released indoor, ventilate well until the treatment is completed. Persons involved in the treatment activity should use protective equipment to protect the eyes and skin from contact with the substance or prevent from inhaling the gas. Rope-off the leaked area and restrict access to the area to the authorized

	personnel only.
	Evacuate the people on the leeward and work on the windward side.
Environmental precaution	: To prevent causing environmental impact, the spilled material should not be released into rivers, etc. directly. The contaminated waste water should be treated appropriately before discharged to the environment.
Recovery, neutralization	: Sweep and collect the material in an empty container. Use lime or soda ash process, and wash away the material from the area with a large amount of water.

7. Handling and Storage

Handling

Technological counter measures	: Being a strong acidic substance, avoid contact with alkali,
Local ventilation/general ventilation	: Use local exhaust ventilation when handling indoor.
Precautions for safe handling	: The container should not be treated roughly. Do not drop, knock down or drag the container. Prevent leakage, spillage or overflow that causes fume to form. Close the container tightly after the use. Wash hands and face, etc. well and gargle after the handling. Eating, drinking or smoking should be only at the designated areas. Use appropriate protective equipment to prevent inhaling, contact with eyes, skin and clothes. Entering the handling area only by the authorized persons.

Storage

Appropriate condition	: Avoid direct sunlight in a well ventilated and if possible, cool place in airtight container.
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※ Please refer the certificate about the details of appropriate storage conditions and precautions for the use as reference material.

8. Exposure Controls/Personal Protection

Facility engineering

If generating dust, seal the source and install local exhaust ventilation system.

Install emergency shower, eye and face washing facility and indicate the facilities conspicuously nearby.

Protective equipment

- ◇Respiratory organs : Dust respirator
- ◇Hands : Protective gloves
- ◇Eyes : Spectacles with a side shield
- ◇Skin and body : Long-sleeved work clothes

Hygiene Controls

- ◇ Wash hands, face, etc. thoroughly after handling this reference material.
- ◇ Remove/take off contaminated clothing. Wash contaminated clothing before reuse.

9. Physical and Chemical Properties

• Appearance, etc.	:	Crystalline powder
• Color	:	White
• Odor	:	No data
• pH	:	Aqueous solution is strongly acidic
• Melting point	:	Ca. 205 °C(Decomposition)
• Boiling point	:	No data
• Flashing point	:	No data
• Explosive range	:	No data
• Vapor pressure	:	No data
• Relative vapor density(Air=1)	:	No data
• Specific gravity or bulk specific gravity	:	2.15 g/cm ³
• Solubility	:	Water-soluble (17.5 g/100 ml), not easily dissolves in ethanol, dissolves readily in pyridine and dimethylformamide
• <i>n</i> -Octanol/water partition coefficient (Log Po/w)	:	No data
• Auto-ignition temperature	:	No data

10. Stability and Reactivity

- ◇ Stability
Stable under dry form
- ◇ Reactivity
Strong acidic compound. Has reducing character and reacts violently with chlorine, bromine, fuming nitric acid, etc. Decomposes when heated, and forms nitrogen and corrosive fume and gas (sulfur dioxide, ammonia). Aqueous solution gradually decomposes and generates ammonium hydrogen sulfate.
- ◇ Conditions to avoid
Sunlight, heat, humidity
- ◇ Hazardous decomposition products
Nitrogen oxide, sulfur oxide, ammonia

11. Toxicological Information

Acute toxicity	Oral	rat	LD50: 3160 mg/kg(RTECS)
	Abdominal cavity	rat	LDLo: 100 mg/kg(RTECS)
Skin corrosivity/ irritability	Oral	mouse	LD50: 1312 mg/kg(RTECS)
	Skin irritation	rabbit	500 mg/24 h serious (RTECS)
Severe damage to eyes/irritation	Eye irritation	rabbit	250 µg/24 h serious (RTECS)
	Eye irritation	rabbit	20 mg moderate (RTECS)

12. Ecological Information

Ecotoxicity

No data available

Toxicity to aquatic

Fish: Fathead minnow LC50 = 70.3mg/L/96hr (ECETOC TR91, 2003)

Degradability, concentration

No data available

Bioaccumulation

No data available

Mobility in soil

No data available

Ozone depletion potential

No data available

13. Disposal Considerations

- Disposal in compliance with the relevant laws and regulations; and ordinances of the local authorities.
 - When disposing of the empty container, make sure that the content is completely removed.
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14. Transport Information

UN Number : 2967

UN : Class 8 (Corrosive substance)

Classification

Material Name : Sulphamic acid

Container : PG III
grade

ICAO/IATA : -

Marine : Not applicable

pollutant

Precautions : Before the transport, check and ensure that there is no damage to the container.

Also check for corrosion or leakage, etc.

Fall, drop and damage should be avoided when loading, and make sure to take preventive measures against load shifting.

15. Regulatory Information

Ship Safety Act (Enforcement Ordinance for the Transport of Dangerous Goods) :

Corrosive Substances) Class 8

Civil Aeronautics Act :

Corrosive substances Class 8

© This SDS is originally prepared for the use of the material in Japan, thus the stated laws and regulations are stipulated and carried out in Japan. The use of the material in other

countries should be referred to and by application of the relevant laws and regulations of the country in which the material will be used.

16. Other Information

References

- International Chemical Safety Cards (ICSC) Japanese version, The Chemical Daily (1992)
- Chemical Goods No.14303, The Chemical Daily(2003)
- Registry of Toxic Effects of Chemical Substance (NIOSH)

Other

The information in this document is not intended to be exhaustive and is based on currently available information and data. The measures given in this document are applicable only to normal handling conditions. When handling this reference material under special conditions etc., it is recommended to take safety measures appropriate to each specific application and context of use. This document is intended to provide information and not intended to guarantee anything in handling this reference material.
