

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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Identity of Substance/Mixture : Certified Reference Material NMIJ CRM 7913-a
 Dimethylarsinic acid Solution
 Recommended Use of the Chemical and Restriction on Use : This CRM is intended for controlling the precision of analysis or to confirm the validity of analytical methods or instruments during the analysis of dimethylarsinic acid. Do not use this reference material for other purposes than testing/research.
 This CRM is a reference material (specified in the Japanese Industrial Standard (JIS) Q 0030).

2. Hazards Identification

GHS Classification: Acute toxicity (oral) : Class 5
 GHS Label element : -
 Signal word : Warning
 Hazard and toxicity : Toxic if swallowed (oral)
 Precautionary Statement : [Preventive Measures]
 Low in harm at normal handling
 [Response]
 If feeling ill, get medical assistance
 [Storage]
 Protect from light, clean place at room temperature.
 Store in a locked area.
 [Disposal]
 Disposal by a commissioned professional industrial waste disposal contractor licensed by the prefectural governor.

 Hazards not mentioned above are either not classifiable or not applicable.

3. Composition/Information on Ingredients

Substance or mixture : Single product

• Component 1

Chemical name : Dimethylarsinic acid
 Chemical formula or structural formula : $(\text{CH}_3)_2\text{As}(\text{O})\text{OH}$
 Content : Approximately 0.002 %
 Reference Number in Gazetted List in Japan : Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : (2)-3432
 Industrial Safety and Health Act : 2-(3)-224
 CAS No. : 75-60-5

Component 2

Chemical name : Water
 Chemical formula or structural formula : H_2O
 Content : 99.99 % or over
 Reference Number in Gazetted List in Japan : Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : -
 Industrial Safety and Health Act : -
 CAS No : 7732-18-5
 Hazardous component : Dimethylarsinic acid

4. First-aid Measures

- ◇ If in eye
 1. Flush carefully with plenty of clean water.
 2. Get medical assistance
- ◇ If on skin
 1. Rinse with plenty of clean water
 2. Take off all the contaminated clothes, get medical assistance
- ◇ If inhaled
 1. Move to get some fresh air and let gargle well
 2. Get medical assistance
- ◇ If swallowed
 1. Wash mouth thoroughly, drink 1 to 2 glasses of water or milk.
 2. Get medical assistance

5. Fire-fighting Measures

Extinguishing media : Powder, carbon dioxide, powder fire extinguishing equipment, sand, water spray system. No particular unusable extinguishing medium

Specific hazards at the time of fire : May generate toxic fume (or gas)

Specific extinguishing measures : Remove fire sources. Transfer the movable containers to a safe place promptly. If impossible to move, cool the periphery by water-spray.
 Extinguishing activity from windward to avoid inhaling toxic gas.

Protecting fire-fighting personnel. : Fire-safe clothing, air-breathing apparatus, self-contained compressed air breathing apparatus, rubber boots.

6. Accidental Release Measures

1. Prevent fire and prepare for fire extinguishing activities.
2. If leaked or spilled in large amount, control it by sand, etc. and collect the material.
3. Remove any source of fire nearby promptly.
4. Rope-off the leaked area to limit the access to the authorized personnel only.
5. To prevent causing environmental impact, do not release the spilled material into rivers, etc. directly.

7. Handling and Storage

Handling

- Use appropriate protective equipment to prevent inhaling vapor, contact with eye and skin.
- Wash hands, face well, gargle. after handling.
- No eating, drinking and smoking when handling.

Storage

- Seal the container after using.
- Protect from light at room temperature in a clean place.
- Store in a locked area.

※ Please refer to the certificate regarding details of appropriate storage conditions and precautions for use as reference material.

8. Exposure Controls/Personal Protection

Points of concern pertaining safety management

Toxic if inhaled or swallowed (oral intake)

Administrative levels

3 µg/m³ (as As)

Occupational exposure limit

- ACGIH TLV-TWA : 0.2 mg(As)/m³
- Japan Society for Occupational Health Recommended Reference Value : 3 µg/m³ (excess lifetime carcinogenesis risk level of 10⁻³)
0.3 µg/m³ (excess lifetime carcinogenesis risk level of 10⁻⁴)
- OSHA PEL 8H-TWA : 0.5 mg(As)/m³

Protective equipment

- Use appropriate protective gloves, safety goggles, etc.

9. Physical and Chemical Properties

- Appearance, etc. : Liquid (normal temperature)
- Color : Clear and colorless
- Odor : No data
- pH : No data
- Melting point : No data
- 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 : 0.997 g/cm³ (25 °C)
- Solubility : Mix freely with water
- *n*-Octanol/water partition coefficient (Log Po/w) : No data
- Auto-ignition temperature : No data

10. Stability and Reactivity

- ◇ Stability
 - Stable under normal condition
- ◇ Reactivity
 - No data available
- ◇ Conditions to avoid
 - No data available
- ◇ Hazardous decomposition products
 - Generates arsenic compound when heated or burned and may be inhaled as vapor

11. Toxicological information

<Dimethylarsinic acid>

Acute toxicity	Oral rat LD50 : 644 mg/kg (RTECS) Inhaled rat LCLo: >2600 mg/m ³ /2H(RTECS) Oral mouse LD50:1200 mg/kg (RTECS) Abdominal cavity mouse LD50:500 mg/kg (RTECS)
Skin corrosivity and irritancy	Skin irritation rat 2.6 ppm/2H RTECS)
Severe damage to eye/eye irritancy	Eye irritation rat 2.6 ppm/2H (RTECS)
Carcinogenicity	As arsenic compound NTP : Group a Known carcinogen IARC: Group 1 Oncogenic for humans Japan Society for Occupational Health : Class 1 oncogenic substance for humans

12. Ecological Information

- Degradability, concentration
- No data available
- Bioaccumulation
- No data available
- Ecotoxicity
- No data available

13. Disposal Considerations

- Disposal shall be in compliance with the ordinances and regulations of local authorities
- Disposal of an empty container shall be after removing/decontaminating the content completely.

14. Transport Information

UN Number : 1572
UN Classification : Class 6.1(poisonous substance)
Shipping Name : CACODYLIC ACID
Packing Group : PG II
ICAO/IATA : Not applicable
Marine pollutant : Not applicable
Precautions : Transfer with care avoiding direct sunlight, leakage or spill due to fall or drop.

15. Regulatory Information

- ◇Poisonous and Deleterious Substances Control Act
 - Article 2 Appended Table No. 1 Poisonous Substances (Arsenic compounds and the formulation containing the substances)
 - ◇Ship Safety Act
 - Regulations for the Carriage and Storage of Dangerous Goods in Ships Articles 2 and 3 Hazardous Materials Public Notice Appended Table No. 4 (Poisonous substance)
 - ◇Civil Aeronautics Act
 - Enforcement Order Article 194 Hazardous Materials Public Notice Appended Table No.9 (Poisonous substance)
 - ◇Water Pollution Control Act
 - Enforcement Order Article 2, Section 2 (Toxic substance)
 - ◇Soil Contamination Countermeasures Act
 - Article 2, Section 1 (Specified toxic substance), Enforcement Order Article 1, 20 (arsenic and its compounds)

 - ◇**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.**
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16. Other Information

Others

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.
