

Arsenious Acid Solution for Iodide

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 10/14/2014

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Arsenious Acid Solution for Iodide
Product code : LC11520

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Carc. 1A H350

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS08

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H350 - May cause cancer
Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves, eye protection
P308+P313 - IF exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5	99.46	Not classified
Arsenic Trioxide	(CAS No) 1327-53-3	0.5	Acute Tox. 2 (Oral), H300 Skin Corr. 1B, H314 Eye Dam. 1, H318 Carc. 1A, H350 Aquatic Acute 2, H401

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Name	Product identifier	%	GHS-US classification
Sulfuric Acid, 96% w/w	(CAS No) 7664-93-9	0.04	Skin Corr. 1A, H314 Eye Dam. 1, H318

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : May cause cancer.
- Symptoms/injuries after inhalation : May cause cancer by inhalation.
- Symptoms/injuries after ingestion : Vomiting. Nausea. Diarrhoea. Impairment of the nervous system.

4.3. Indication of any immediate medical attention and special treatment needed

Hospitalize at once.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Gloves.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Keep container closed when not in use.
Incompatible products	: Strong bases. Strong oxidizers.
Incompatible materials	: Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Arsenic Trioxide (1327-53-3)		
USA ACGIH	ACGIH TWA (mg/m³)	0.01 mg/m³ as As
USA OSHA	OSHA PEL (TWA) (mg/m³)	0.01 mg/m³ as As, inorganic compounds

Sulfuric Acid, 96% w/w (7664-93-9)		
USA ACGIH	ACGIH TWA (mg/m³)	0.2 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	1 mg/m³

8.2. Exposure controls

Appropriate engineering controls	: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation. Material should be handled in a laboratory hood whenever possible.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Respiratory protection	: Wear appropriate mask.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless
Odour	: None.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1 g/ml
Solubility	: Soluble in water. Water: Solubility in water of component(s) of the mixture : • Arsenic Trioxide: 2 g/100ml • Sulfuric Acid, 96% w/w: Complete
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available

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Oxidising properties : No data available

Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizers. Strong bases.

10.6. Hazardous decomposition products

Arsenic and its oxides. Sulfur compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Arsenious Acid Solution for Iodide	
LD50 oral rat	2941 mg/kg
ATE US (oral)	2941 mg/kg bodyweight

Arsenic Trioxide (1327-53-3)	
LD50 oral rat	14.6 mg/kg
ATE US (oral)	14.6 mg/kg bodyweight

Sulfuric Acid, 96% w/w (7664-93-9)	
LD50 oral rat	2140 mg/kg bodyweight (Rat; Experimental value)

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 mg/kg bodyweight

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer.

Arsenic Trioxide (1327-53-3)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	2 - Known Human Carcinogens

Sulfuric Acid, 96% w/w (7664-93-9)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

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Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause cancer by inhalation.
Symptoms/injuries after ingestion	: Vomiting. Nausea. Diarrhoea. Impairment of the nervous system.

SECTION 12: Ecological information

12.1. Toxicity

Arsenic Trioxide (1327-53-3)	
LC50 fishes 1	> 1 mg/l
EC50 Daphnia 1	8.23 mg/l 24 hr.

Sulfuric Acid, 96% w/w (7664-93-9)	
LC50 fishes 1	42 mg/l (96 h; Gambusia affinis)
EC50 Daphnia 1	29 mg/l (24 h; Daphnia magna)
LC50 fish 2	49 mg/l (48 h; Lepomis macrochirus)
TLM fish 1	42 mg/l (96 h; Gambusia affinis)
Threshold limit other aquatic organisms 1	6900 mg/l (24 h; Pseudomonas fluorescens)

12.2. Persistence and degradability

Arsenious Acid Solution for Iodide	
Persistence and degradability	Not established.

Arsenic Trioxide (1327-53-3)	
Persistence and degradability	Not established.

Sulfuric Acid, 96% w/w (7664-93-9)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Arsenious Acid Solution for Iodide	
Bioaccumulative potential	Not established.

Arsenic Trioxide (1327-53-3)	
Bioconcentration factor (BCF REACH)	236
Bioaccumulative potential	Not established.

Sulfuric Acid, 96% w/w (7664-93-9)	
Log Pow	-2.20 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable.

Water (7732-18-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer	: No additional information available
Effect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

Transport document description :

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Arsenic Trioxide (1327-53-3)

Listed on United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	10000 lb 100 lb if the substance is solid in powder form with particle size less than 100 microns, or is in solution or molten form
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Sulfuric Acid, 96% w/w (7664-93-9)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

15.2. International regulations

CANADA

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WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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Arsenic Trioxide (1327-53-3)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Sulfuric Acid, 96% w/w (7664-93-9)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class E - Corrosive Material
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Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

Arsenic Trioxide (1327-53-3)

Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity

Arsenic Trioxide (1327-53-3)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	Yes			

SECTION 16: Other information

Other information :
: None.

Full text of H-phrases: see section 16:

Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Aquatic Acute 2	Hazardous to the aquatic environment — Acute Hazard, Category 2
Carc. 1A	Carcinogenicity, Category 1A
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H300	Fatal if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H350	May cause cancer
H401	Toxic to aquatic life

NFPA health hazard

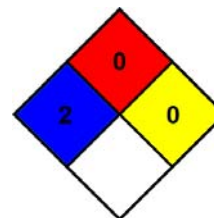
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard
Personal Protection : B

SDS US (GHS HazCom 2012)

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