OXFORD LAB FINE CHEM LLP

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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

ARSENIC AAS STANDARD SOLUTION
1000mg/Ltr Ar In Diluted HCI
MSDS CAS:

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product
Product Name: ARSENIC AAS STANDARD SOLUTION
CAS#:
C.I. No.: Not available.
Synonym: Arsenic Atomic Absorption Standard.
Chemical Name: Not available.
Chemical Formula: Not available.

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

Company identification: **OXFORD LAB FINE CHEM LLP**
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
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Mumbai, Maharashtra, INDIA.
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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Water		97.9
Hydrochloric Acid		2
Arsenic trioxide		0.1

Toxicological Data on Ingredients: Not applicable.

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). Non-corrosive for lungs. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC [Arsenic trioxide]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Arsenic trioxide]. TERATOGENIC EFFECTS: Classified POSSIBLE for human [Arsenic trioxide]. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, lungs, liver, mucous membranes, cardiovascular system, upper respiratory tract, eyes, central nervous system (CNS), teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention

Section 4: First Aid Measures (Continued...)

Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.
Auto-Ignition Temperature: Not available.
Flash Points: Not available.
Flammable Limits: Not available.
Products of Combustion: Not available.
Fire Hazards in Presence of Various Substances: Not available.
Explosion Hazards in Presence of Various Substances:
Slightly explosive in presence of reducing materials, of organic materials, of metals, of alkalis. Non-explosive in presence of open flames and sparks, of shocks.
Fire Fighting Media and Instructions: Not available.
Special Remarks on Fire Hazards: Not available.
Special Remarks on Explosion Hazards: Reacts exlposively with metallic powders, carbides, cyanides, sulfides, alkalies and turpentine. Can react explosively with many reducing agents. Arsine, phosphine, tetraborane all oxidized explosively in presence of nitric acid. Cesium and rubidium acetylides explode in contact with nitric acid. Explosive reaction with Nitric Acid + Nitrobenzene + water. Detonation with Nitric Acid + 4-Methylcyclohexane. (Nitric acid, fuming)

Section 6: Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.

Large Spill:

Corrosive liquid. Oxidizing material. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up.. Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as metals, alkalis. May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strong polyethylene inner package.

Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers. Do not store above 25°C (77°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Personal Protection:

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Section 8: Exposure Controls/Personal Protection (Continued...)

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: **Arsenic trioxide TWA: 0.05 (mg/m3) [Canada] Nitric acid, fuming TWA: 2 STEL: 4 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 2 STEL: 4 (ppm) [Australia] TWA: 2 STEL: 4 from NIOSH TWA: 5 STEL: 10 (mg/m3) from NIOSH TWA: 2 STEL: 4 (ppm) from OSHA (PEL) [United States] TWA: 5 STEL: 10 (mg/m3) from OSHA (PEL) [United States]Consult local authorities for acceptable exposure limits.**

Section 9: Physical and Chemical Properties

Physical state and appearance	**: Liquid**
Odor	**: Not available.**
Taste	**: Not available.**
Molecular Weight	**: Not available.**
Color	**: Clear Colorless**
pH (1% soln/water)	**: <1 [Acidic.]**
Boiling Point	**: ca. 105°C (221°F).**
Melting Point	**: ca. -5°C (23°F)**
Critical Temperature	**: Not available.**
Specific Gravity	**: ca. 1.1 (Water = 1).**
Vapor Pressure	**: The highest known value is 6.4 kPa (@ 20°C) (Nitric acid, fuming). Weighted average: 2.36 kPa (@ 20°C).**
Vapor Density	**: The highest known value is 2.3 (Air = 1) (Nitric acid, fuming). Weighted average: 0.64 (Air = 1).**
Volatility	**: Not available.**
Odor Threshold	**: The highest known value is 0.29 ppm (Nitric acid, fuming).**
Water/Oil Dist. Coeff.	**: Not available.**
Ionicity (in Water)	**: Not available.**
Dispersion Properties	**: See solubility in water.**
Solubility	**: Easily soluble in cold water, hot water.**

Section 10: Stability and Reactivity Data

Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Incompatible materials.
Incompatibility with various substances: Reactive with metals, alkalis. Slightly reactive to reactive with reducing agents, combustible materials, organic materials, acids.
Corrosivity: Extremely corrosive in presence of steel, of copper, brass Non-corrosive in presence of glass, of aluminum, of stainlesssteel(304), of stainless steel(316).
Special Remarks on Reactivity: A strong oxidizer. Reacts violently with alcohol, organic material, turpene, charcoal. Violent reaction with Nitric acid + Acetone and Sulfuric acid. Nitric Acid will react with water or steam to produce heat and toxic, corrosive and flammable vapors. (Nitric acid, fuming).
Special Remarks on Corrosivity: No corrosive effect on bronze. Nitric acid will attack some forms of plastics, rubber and coatings.
Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals:
LD50: Not available. LC50: Not available.
Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC [Arsenic trioxide]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Arsenic trioxide]. TERATOGENIC EFFECTS: Classified POSSIBLE for human [Arsenic trioxide]. Contains material which may cause damage to the following organs: blood, kidneys, lungs, liver, mucous membranes, cardiovascular system, upper respiratory tract, eyes, central nervous system (CNS), teeth.
Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive).
Special Remarks on Toxicity to Animals: LDL - Lowest Published Lethal Dose [Human] - Route: Oral; Dose: 430 mg/kg (Nitric acid, fuming).
Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects (effects on newborn and fetotoxicity) based on animal data. (Nitric acid, fuming). Passes through the placental barrier in human. May affect genetic material. May cause adverse reproductive (paternal and maternal effects as well as fetotoxicity or post implantation mortality) and birth defects (teratogen). May cause cancer (tumorigenic) (Arsenic Trioxide).
Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.
BOD5 and COD: Not available.
Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

Land transport (ADR-RID)

Proper shipping name : HYDROCHLORIC ACID
UN N° : 1789
H.I. nr : 80
ADR - Class : 8

Sea transport (IMDG) [English only]

Proper shipping name : HYDROCHLORIC ACID
UN N° : 1789
ADR - Class : 8
IMO-IMDG - Packing group : III

Air transport (ICAO-IATA) [English only]
Proper shipping name : HYDROCHLORIC ACID.
UN N° : 1789
ADR - Class : 8
IATA - Packing group : III

Section 15: Other Regulatory Information

Federal and State Regulations: **California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Arsenic trioxide California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Arsenic trioxide California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Arsenic trioxide Connecticut hazardous material survey.: Arsenic trioxide Illinois chemical safety act: Arsenic trioxide.**

Other Regulations: **OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).**

Other Classifications:

WHMIS (Canada): **Not controlled under WHMIS (Canada).**

DSCL (EEC): **R8- Contact with combustible material may cause fire. R22- Harmful if swallowed. R36/38- Irritating to eyes and skin. R45- May cause cancer. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately and show this container or label. S53- Avoid exposure - obtain special instructions before use.**

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection:

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment: **Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Face shield.**

Section 16 - Additional Information

References: **Not available.**

Other Special Considerations: **Not available.**

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