

ARSENIC

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1. Product Identification

Synonyms: None

CAS No.: 7440-38-2

Molecular Weight: 74.9216

Chemical Formula: As

Product Codes: CHEM-104

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Arsenic	7440-38-2	99 - 100%	Yes

3. Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).

SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 3 - Severe

Flammability Rating: 1 - Slight

Reactivity Rating: 2 - Slight

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Blue (Health)

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to kidneys, lungs, the nervous system, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

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. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

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

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. 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.

5. Fire Fighting Measures

Flammability of the Product:

May be combustible at high temperature.

Auto-Ignition Temperature:

Not available.

Flash Points:

Not available.

Flammable Limits:

Not available.

Products of Combustion:

Some metallic oxides.

Fire Hazards in Presence of Various Substances:

Flammable in presence of open flames and sparks, of heat, of oxidizing materials.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:

Material in powder form, capable of creating a dust explosion. When heated to decomposition it emits highly toxic fumes.

Special Remarks on Explosion Hazards:

Not available.

6. Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. Handling and Storage

Precautions:

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, moisture.

Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust 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:

TWA: 0.01 from ACGIH (TLV) [United States] [1995] Consult local authorities for acceptable exposure limits.

9. Physical and Chemical Properties

Physical state and appearance:

Solid. (Lustrous solid.)

Odor:

Not available.

Taste:

Not available.

Color:

Silvery-grey.

pH (1% soln/water):

Not applicable.

Boiling Point:

Not available.

Melting Point:

Sublimation temperature: 615°C (1139°F)

Critical Temperature:

Not available.

Specific Gravity:

5.72 (Water = 1)

Vapor Pressure:

Not applicable.

Vapor Density:

Not available.

Volatility:

Not available.

Odor Threshold:

Not available.

Water/Oil Dist. Coeff.:

Not available.

Ionicity (in Water): Not available.

Dispersion Properties:

Not available.

Solubility:

Insoluble in cold water, hot water.

10. Stability and Reactivity

Stability:

The product is stable.

Instability Temperature:

Not available.

Conditions of Instability:

Not available.

Incompatibility with various substances:

Reactive with oxidizing agents, acids, moisture.

Corrosivity:

Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Not available.

Special Remarks on Corrosivity:

Not available.

Polymerization:

Will not occur.

11. Toxicological Information

Toxicological Data on Ingredients:

Arsenic: ORAL (LD50): Acute: 763 mg/kg [Rat]. 145 mg/kg [Mouse].

Routes of Entry:

Inhalation. Ingestion.

Toxicity to Animals:

Acute oral toxicity (LD50): 145 mg/kg [Mouse].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH. Causes damage to the following organs: kidneys, lungs, the nervous system, mucous membranes.

Other Toxic Effects on Humans:

Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals:

Not available.

Special Remarks on Chronic Effects on Humans:

Not available.

Special Remarks on other Toxic Effects on Humans:

Not available.

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 as toxic as the original product.

Special Remarks on the Products of Biodegradation:

Not available.

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. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

DOT Classification:

CLASS 6.1: Poisonous material.

Identification: :

Arsenic UNNA: UN1558 PG: II

Special Provisions for Transport:

Not available.

15. 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 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 Pennsylvania RTK: Arsenic Massachusetts RTK: Arsenic TSCA 8(b) inventory: Arsenic

Other Regulations:

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

Other Classifications:

WHMIS (Canada):

CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R22- Harmful if swallowed. R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 1

Reactivity: 2

Personal Protection: E

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

16. Other Information

NFPA Ratings:

Health: 3 Flammability: 1 Reactivity: 2

Other Special Considerations:

Not available.

Label Hazard Warning:

CAUTION! MAY IRRITATE RESPIRATORY TRACT.

Label Precautions:

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Label First Aid:

If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

Product Use:

Laboratory Reagent and Consumer Hobby.

Revision Information:

None

References:

-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.

-Liste des produits purs tératogènes, mutagènes, cancérigènes. Répertoire toxicologique de la Commission de la Santé et de la Sécurité du Travail du Québec.

- Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec.
- SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.
- The Sigma-Aldrich Library of Chemical Safety Data, Edition II.
- Guide de la loi et du règlement sur le transport des marchandises dangereuses au Canada. Centre de conformité international Ltée. 1986.

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