

## Chemical Safety Data Sheet MSDS / SDS

## Arsenic tribromide SDS

Revision Date:2024-04-25 Revision Number:1

|           |            |            |            |            |            |            |            |
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: Arsenic tribromide  
CAS: 7784-33-0

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.  
Uses advised against: none

**Company Identification**

Company: Chemicalbook.in  
Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090  
Telephone: +91 9550333722

**SECTION 2: Hazards identification****Classification of the substance or mixture**

Acute toxicity - Category 3, Oral  
Acute toxicity - Category 3, Inhalation

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1  
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

### GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

### Hazard statement(s)

H301 Toxic if swallowed

H331 Toxic if inhaled

H410 Very toxic to aquatic life with long lasting effects

### Precautionary statement(s)

### Prevention

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

### Response

P301+P316 IF SWALLOWED: Get emergency medical help immediately.

P331 Specific treatment (see ... on this label).

P330 Rinse mouth.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P316 Get emergency medical help immediately.

P391 Collect spillage.

### Storage

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and

regulations, and product characteristics at time of disposal.

**Other hazards which do not result in classification**

no data available

**SECTION 3: Composition/information on ingredients**

**Substance**

Chemical name: Arsenic tribromide

Common names and synonyms: Arsenic tribromide

CAS number: 7784-33-0

EC number: 232-057-4

Concentration: 100%

**SECTION 4: First aid measures**

**Description of necessary first-aid measures**

**If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

**Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

**Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

**Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### **Most important symptoms/effects, acute and delayed**

Excerpt from ERG Guide 151 [Substances - Toxic (Non-combustible)]: Highly toxic, may be fatal if inhaled, swallowed or absorbed through skin. Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. (ERG, 2016)

### **Indication of immediate medical attention and special treatment needed, if necessary**

no data available

## **SECTION 5: Firefighting measures**

### **Suitable extinguishing media**

If material involved in fire: Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn or burns with difficulty.) Do not use water on material itself. If large quantities of combustibles are involved, use water in flooding quantities as spray and fog. Use water spray to knock down vapors. Arsenic bromide, solid

### **Specific hazards arising from the chemical**

Excerpt from ERG Guide 151 [Substances - Toxic (Non-combustible)]: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Containers may explode when heated. Runoff may pollute waterways. (ERG, 2016)

### **Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

## **SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must

be avoided.

#### Methods and materials for containment and cleaning up

Prompt cleanup and removal are necessary. Control runoff and isolate discharged material for proper disposal.

### SECTION 7: Handling and storage

#### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

#### Conditions for safe storage, including any incompatibilities

Protect container against physical damage. Store in well ventilated area away from food or food products and combustible materials. Inorganic arsenic compd

### SECTION 8: Exposure controls/personal protection

#### Control parameters

#### Occupational Exposure limit values

|           |   |
|-----------|---|
| Component | Arsenic tribromide  |
| CAS No.   | 7784-33-0   |
|           | 5 mg/cu m (as As); NIOSH considers arsenic (inorganic compd, as As) to be a potential occupational carcinogen. /Arsenic (inorganic compd, as As)/<br>Recommended Exposure Limit: 15 Ceiling Limit: (0.002 mg/cu m). /Arsenic (inorganic compd, as As)/<br>NIOSH usually recommends that occupational exposures to carcinogens be limited to the lowest feasible concentration. /Arsenic (inorganic compounds, as As)/ |

#### Biological limit values

no data available

#### Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

## Individual protection measures, such as personal protective equipment (PPE)

### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

|   |   |
|---|---|
| Physical state:   | Arsenic bromide is a yellowish white crystalline solid. Absorbs moisture from the air. Decomposed by water to form arsenic acid and hydrobromic acid, a corrosive. Intensely toxic. |
| Colour:   | Orthorhombic prisms   |
| Odour:  | no data available   |
| Melting point/freezing point:                             | 31°C  |
| Boiling point or initial boiling point and boiling range: | 221°C   |
| Flammability:   | no data available   |
| Lower and upper explosion limit/flammability limit:       | no data available   |

|  |   |
|--|---|
| Flash point:                           | no data available   |
| Auto-ignition temperature:             | no data available   |
| Decomposition temperature:             | no data available   |
| pH:                                    | no data available   |
| Kinematic viscosity:                   | no data available   |
| Solubility:                            | Soluble in hydrocarbons; carbon tetrachloride; very soluble in ether, benzene |
| Partition coefficient n-octanol/water: | no data available   |
| Vapour pressure:                       | 1 mm Hg @ 41.8 deg C  |
| Density and/or relative density:       | 3.54 g/cm <sup>3</sup>  |
| Relative vapour density:               | no data available   |
| Particle characteristics:              | no data available   |

## SECTION 10: Stability and reactivity

### Reactivity

NIOSH considers arsenic (inorganic compounds, as As) to be a potential occupational carcinogen. Arsenic (inorganic compounds as As)  
 5 mg/cu m (as AS); NIOSH considers arsenic (inorganic cmpd, as As) to be a potential occupational carcinogen. Arsenic (inorganic cmpd, as As)

### Chemical stability

Fumes in moist air; decomp by water forming arsenic trioxide and hydrogen bromide.

### Possibility of hazardous reactions

Acidic inorganic salts, such as ARSENIC BROMIDE, are generally soluble in water. The resulting solutions contain moderate concentrations of hydrogen ions and have pHs of less than 7.0. They react as acids to neutralize bases. These neutralizations generate heat, but less or far less than is generated by neutralization of inorganic acids, inorganic oxoacids, and carboxylic acid. They usually do not react as either oxidizing agents or reducing agents but such behavior is not impossible. Many of these compounds catalyze organic reactions.

#### **Conditions to avoid**

no data available

#### **Incompatible materials**

When water soln of arsenicals are in contact with active metals such as arsenic, iron, aluminum, zinc, ... highly toxic fumes of arsenic /including arsine are released/. arsenic compd

#### **Hazardous decomposition products**

When heated to decomp it emits very toxic fumes of /arsenic and hydrogen bromide/.

### **SECTION 11: Toxicological information**

#### **Acute toxicity**

Oral: no data available

Inhalation: no data available

Dermal: no data available

#### **Skin corrosion/irritation**

no data available

#### **Serious eye damage/irritation**

no data available

#### **Respiratory or skin sensitization**

no data available



**Germ cell mutagenicity**

no data available

**Carcinogenicity**

Classification of carcinogenicity: 1) evidence in humans: sufficient; 2) evidence in animals: limited. Overall summary evaluation of carcinogenic risk to humans is Group 1: Carcinogenic to humans. NOTE: This evaluation applies to the group of chemicals as a whole and not necessarily to all individual chemicals within the group. Arsenic and arsenic compounds

**Reproductive toxicity**

no data available

**STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**Other adverse effects**

no data available

**SECTION 13: Disposal considerations****Disposal methods****Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

**Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

**SECTION 14: Transport information****UN Number**

ADR/RID: UN1555 (For reference only, please check.)

IMDG: UN1555 (For reference only, please check.)

IATA: UN1555 (For reference only, please check.)

**UN Proper Shipping Name**

ADR/RID: ARSENIC BROMIDE (For reference only, please check.)

IMDG: ARSENIC BROMIDE (For reference only, please check.)

IATA: ARSENIC BROMIDE (For reference only, please check.)

**Transport hazard class(es)**

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

**Packing group, if applicable**

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

**Environmental hazards**

ADR/RID: Yes

IMDG: Yes

IATA: Yes

**Special precautions for user**

no data available

**Transport in bulk according to IMO instruments**

no data available

**SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Not Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Not Listed.

**IECSC)**

Not Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

**SECTION 16: Other information**

**Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

## References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

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