



## MATERIAL SAFETY DATA SHEETS

45

Arsenous trichloride

### 1. CHEMICAL IDENTITY

**Chemical Name :** Arsenous trichloride

**Chemical Classification:** Toxic

**Trade Name :**

**Synonyms:** Arsenous chloride, Arsenic trichloride, Arsenous chloride solutions, Butter of arsenic, Arsenic (III) chloride, Trichloroarsine, Caustic Oil of Arsenic

**Formula :** AsCl<sub>3</sub>

**CAS No:** 7784-34-1

**UN No:** 1560

#### Regulated Identification

**Shipping Name :**

**Hazchem Code :** 2Z

**Codes / Label :** Class 6.1, Toxic

**Hazardous Waste ID No :**

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
-----------------------	------------	-----------------------	------------

1	Arsenous trichloride	7784-34-1	3
---	----------------------	-----------	---

2			4
---	--	--	---

### 2. PHYSICAL / CHEMICAL DATA

**Boiling Pt. °C:** 130.1

**Physical State:** Liquid.

**Appearance:** A colorless to yellow oily fuming liquid.

**Melting Pt °C:** -8.5

**Vapour Pressure @ 35°C mmHg:** 10

**Odour:** Acrid

**Vapour Density(Air =1):** 6.25

**Solubility in water at 30°C g/100ml:** Decomposes.

**Others:** Miscible with chloroform, carbon tetrachloride, iodine, sulfur, alkali iodides, oils and fats.

**Specific Gravity (Water =1 ):** 2.1450 @ 25 deg C

**pH :**

### 3. FIRE / EXPLOSION HAZARD DATA

**Flammability :** No

**LEL:**

**Flash Point °C in OC:**

**TDG Flammability:**

**UEL:**

**Flash Point °C in CC:**

**Autoignition Temperature °C :**

**Explosion sensitivity to impact:**

**Explosion sensitivity to static Electricity:**

**Hazardous Combustion Products :** Irritating and toxic hydrogen chloride formed when involved in fire.

**Hazardous Polymerization :** May occur.

**Combustible Liquid:**

**Explosive Material:**

**Corrosive Material**

**Flammable Material:** No

**Oxidiser :**

**Others:**

**Pyrophoric Material:**

**Organic Peroxide :**

### 4. REACTIVITY DATA

**Chemical Stability :** Stable under normal temperatures and pressures.

**Incompatibility with other material** : Moisture, strong oxidizing agents.

**Reactivity** : Powdered aluminum may cause a violent reaction. it is decomposed by water to form arsenic hydroxide and hydrogen chloride. Exposure to light forms toxic gas. Violent reaction with anhydrous ammonia, strong acids, strong oxidizers and halogens. Corrodes metals in the presence of moisture.

**Hazardous Reaction Products** : Hydrogen chloride, nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen, oxides of arsenic.

## 5. HEALTH HAZARD DATA

**Routes of entry:** Inhalation, Ingestion, Skin and Eyes

### Effects of Exposure / Symptoms:

**Inhalation:** May cause respiratory tract irritation. Inhalation of arsenic compounds may lead to irritation of the respiratory tract and leading to possible nasal perforation. Long-term exposure to arsenic compounds may produce impairment of peripheral circulation. **Ingestion:** May be fatal if swallowed. May cause irritation of the digestive tract. Ingestion of arsenical compounds may cause burning of the lips, throat constriction, swallowing difficulties, severe abdominal pain, severe nausea, projectile vomiting, and profuse diarrhea. Ingestion of arsenic compounds can produce convulsions, coma, and possibly death within 24 hours. **Skin:** May cause skin irritation. Exposure to arsenic compounds may produce hyperpigmentation of the skin and hyperkeratoses of plantar and palmar surfaces as well as both primary irritation and sensitization types. **Eye:** May cause eye irritation. May cause chemical conjunctivitis and corneal damage.

### Emergency Treatment :

**Inhalation:** Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth respiration.

**Skin:** Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do not induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

---

<b>LD50 (oral-rat) mg/kg:</b>		<b>STEL:</b>	
<b>LC50 (rat) mg/kg:</b>		<b>Odour Threshold:</b>	
<b>Permissible Exposure Limit:</b>	0.5 mg/m <sup>3</sup>	<b>TLV (ACGIH) :</b>	0.01 mg/m <sup>3</sup>

---

<b>NFPA Hazard</b>	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Special</b>
<b>Signals</b>	3	0	0	

## 6. PREVENTIVE MEASURES

**Personal Protective Equipment** : Wear appropriate protective eyeglasses or chemical safety goggles.

Wear appropriate protective gloves to prevent skin exposure. Wear appropriate protective clothing to prevent skin exposure.

**Handling** : Wash thoroughly after handling. Wash hands before eating. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Store protected from light. Do not allow contact with water. Keep from contact with moist air and steam.

**Storage** : Store in a tightly closed container. Store in a cool, dry, well-ventilated

area away from incompatible substances. Poison room locked. Store protected from moisture. Store protected from light.

**Precautions :**

## 7. EMERGENCY / FIRST AID MEASURES

### FIRE:

**Fire Extinguishing Media :** Extinguish fire using agent suitable for type of surrounding fire.

**Special Procedure :** 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.

**Unusual Hazards :** When in contact with active metals such as arsenic, iron, aluminum, zinc, or when heated to decomposition, it emits highly toxic fumes of arsenic.

### EXPOSURE: First Aid Measures:

**Inhalation:** Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth respiration.

**Skin:** Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do not induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

### Antidotes / Dosages:

### SPILLS :

**Steps To Be Taken :** Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Avoid runoff into storm sewers and ditches which lead to waterways. Provide ventilation. Do not get water inside containers.

### Waste Disposal Method:

## 8. ADDITIONAL INFORMATION / REFERENCES

## 9. MANUFACTURERS / SUPPLIERS DATA

**NAME OF FIRM :**

**Contact person**

**MAILING ADDRESS :**

**in Emergency :**

**TELEPHONE / TELEX NOS :**

**Local Bodies involved :**

**TELEGRAPHIC ADDRESS :**

**Standard Packing :**

**OTHERS :**

**Trem Card Details / Ref :**

## 10. DISCLAIMER

Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is up to the manufacturer/ seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured / handled or sold by him as the case may be. The Government makes no warranties expressed or implied in the respect of the adequacy of this document for any particular purpose.

*End of document*

*Total No. of Pages: 3*