

# Material Safety Data Sheet



ARSENIC TRIOXIDE AR

VERSION : 04  
DATE OF ISSUE : 01-08-2023  
SUPERSEDES : 03

Product Code : 21960

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## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Trade name : ARSENIC TRIOXIDE AR  
Product code : 21960  
Identification of the product : ARSENIC TRIOXIDE AR  
CAS No : 1327-53-3

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

Identified uses : Scientific research and development

### 1.3. Details of the supplier of the safety data sheet

Company identification : MOLYCHEM  
Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor,  
Mumbai – 400 002 (INDIA)  
Tel:+91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.  
Email : [info@molychem.net](mailto:info@molychem.net)  
Works: Plot No. B/9, Badlapur M.I.D.C.,OPP.Shobhavat  
Textile Co.,Kulgaon, Badlapur (E), Dist.-Thane-421 503.

### 1.4. Emergency telephone number

Emergency number : +91 22 4066 8111 (10:00am - 6:00 pm)

## 2. Hazards identification –DSD

### 2.1. Classification of the substance or mixture

Acute toxicity, (Category 2) H300: Fatal if swallowed.  
Skin corrosion, (Sub-category 1B) H314: Causes severe skin burns and eye damage.  
Serious eye damage, (Category 1) H318: Causes serious eye damage.  
Carcinogenicity, (Category 1A) H350: May cause cancer.  
Specific target organ toxicity - H372: Causes damage to organs through  
repeated exposure, (Category 1), prolonged or repeated exposure.  
Respiratory system, Cardiovascular  
system, Gastrointestinal tract  
Short-term (acute) aquatic hazard, H400: Very toxic to aquatic life.  
(Category 1)  
Long-term (chronic) aquatic, H410: Very toxic to aquatic life with long  
hazard (Category 1) lasting effects.

### 2.2. Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word

Danger

Hazard Statements

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H300	Fatal if swallowed.
H314	Causes severe skin burns and eye damage.
H350	May cause cancer.
H372	Causes damage to organs (Respiratory system, Cardio-vascular system, Gastrointestinal tract) through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements	
P260	Do not breathe dust.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none
Restricted to professional users.	

**2.3. Other hazards :** This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 3.Composition/information on ingredients

### 3.1 Substances

Synonyms	: Arsenous acid Arsenic trioxide
Formula	: As <sub>2</sub> O <sub>3</sub>
Molecular weight	: 197,84 g/mol
CAS-No.	: 1327-53-3
EC-No.	: 215-481-4

Component	Classification	Concentration
<b>Arsenic trioxide</b> Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No. 1327-53-3	Acute Tox. 2; Skin Corr.	<= 100 %
EC-No. 215-481-4	1B; Eye Dam. 1; Carc. 1A;	
Index-No. 033-003-00-0	STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H300, H314, H318, H350,	

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H372, H400, H410

## **4. First aid measures**

### **4.1. Description of first aid measures**

#### **General advice**

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### **If inhaled**

After inhalation: fresh air. Call in physician.

#### **In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### **In case of eye contact**

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

#### **If swallowed**

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

## **5. Fire-fighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

### **5.2. Special hazards arising from the substance or mixture**

Arsenic oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

### **5.3. Advice for fire-fighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### **5.4 Further information**

Prevent fire extinguishing water from contaminating surface water or the ground water system.

## **6. Accidental release measures**

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

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

## **6.2. Environmental precautions**

Do not let product enter drains.

## **6.3. Methods and material for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## **6.4. Reference to other sections**

For disposal see section 13.

## **7. Handling and storage**

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture.

#### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

### **7.2. Conditions for safe storage, including any incompatibilities**

#### **Storage conditions**

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

#### **Storage class**

Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

### **7.3. Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **8. Exposure controls/personal protection**

### **8.1. Exposure controls**

Personal protection : Avoid all unnecessary exposure.  
Respiratory protection : Wear approved mask.  
Hand protection : Wear protective gloves.  
Skin protection : Wear suitable protective clothing.  
Eye protection : Chemical goggles or safety glasses.  
Others : When using, do not eat, drink or smoke.

### **8.2. Control parameters**

Occupational Exposure Limits : No data available.

## **9. Physical and chemical properties**

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## 9.1. Information on basic physical and chemical properties

Physical state	powder
Color	white, off white
Odor	odorless
Melting point/freezing point	Melting point/ range: 313 °C.
Initial boiling point and boiling range	460 °C at 1.013 hPa
Flammability (solid, gas)	The product is not flammable.
Upper/lower flammability or explosive limits	No data available
Flash point	Not applicable
Autoignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Viscosity	Viscosity, kinematic : No data available Viscosity, dynamic : No data available
Water solubility	17.8 g/l at 20 °C - OECD Test Guideline 105- completely soluble
Partition coefficient: n-octanol/water	No data available
Vapor pressure	0.000001 hPa at 66 °C
Density	3.738 g/cm <sup>3</sup>
Relative density	3.87 at 22.3 °C - OECD Test Guideline 109
Relative vapor density	No data available
Particle characteristics	No data available
Explosive properties	No data available
Oxidizing properties	None

## 9.2. Other information

No data available

## 10. Stability and reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3. Possibility of hazardous reactions

No data available

### 10.4. Conditions to avoid

Risk of explosion with:  
Aluminum

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Magnesium

Zinc

Violent reactions possible with:

halogens

Hydrogen halides

strong reducing agents

Bromine

Fluorine

halogen-halogen compounds

Hydrogen fluoride

Nitrates

chlorates

Mercury

## 10.5. Incompatible materials

Heat.

no information available

## 10.6. Hazardous decomposition products

In the event of fire: see section 5

## 11. Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Fatal if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer.
Reproductive toxicity	: Not classified
STOT-single exposure	: No data available
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## 12. Ecological information

### 12.1. Toxicity

No data available

### 12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

Bioaccumulation                      Lepomis cyanellus(Arsenic trioxide)

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Bioconcentration factor (BCF): 236

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Endocrine disrupting properties

### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7 Other adverse effects

No data available

## 13. Disposal considerations

### 13.1. Waste treatment methods

No data available

## 14. Transport information

### 14.1. UN number

ADR/RID: - 1561

IMDG : 1561

IATA: 1561

### 14.2. UN proper shipping name

ADR/RID :

ARSENIC TRIOXIDE

IMDG:

ARSENIC TRIOXIDE

IATA:

Arsenic trioxide

### 14.3. Transport hazard class(es)

ADR/RID : 6.1

IMDG : 6.1

IATA : 6.1

### 14.4. Packaging group

ADR/RID : II

IMDG : II

IATA : II

### 14.5 Environmental hazards

ADR/RID : yes

IMDG : Marine pollutant: yes

IATA : no

### 14.6 Special precautions for user

Tunnel restriction code : (D/E)

Further information : No data available

### **Further information**

Not classified as dangerous in the meaning of transport regulations.

## 15. Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

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## Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Arsenic trioxide

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REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Arsenic trioxide

This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr. 1907/2006.  
Listed substance / Sunset Date : Arsenic trioxide / 21.05.2015

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

## National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. H2 ACUTE TOXIC

E1 ENVIRONMENTAL HAZARDS  
8 Arsenic(III) oxide,  
Arsenic(III) acid and /or its  
Salts

## Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

## 15.2. Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## 16. Other information



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## **Abbreviations and acronyms :**

PBT : persistent, bioaccumulative and toxic.

vPvB: very persistent and very bioaccumulative

**Sources of key data used :** REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

**Further information :** None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008  
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## **End of document**

**Prepared by: MOLYCHEM (INDIA)**

**For questions contact: MOLYCHEM**

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