

Chemical Safety Data Sheet MSDS / SDS

TRIMETHYLARSINE OXIDE

Revision Date:2026-04-26 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name : TRIMETHYLARSINE OXIDE
CBnumber : CB9261167
CAS : 4964-14-1
Synonyms : Trimethylarsinoxide, TRIMETHYLARSINE OXIDE

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
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS) : No data available
Signal word : No data available

Precautionary statements

No data available

Hazard statements

No data available

SECTION 3: Composition/information on ingredients

Substance

Product name : TRIMETHYLARSINE OXIDE
Synonyms : Trimethylarsinoxide, TRIMETHYLARSINE OXIDE
CAS : 4964-14-1
MF : C3H9AsO

SECTION 4: First aid measures

First Aid Measures

General advice

Consult a physician if necessary. Remove to fresh air.

Eye contact

Wash with plenty of water.

Skin Contact

Wash skin with soap and water.

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Ingestion

Never give anything by mouth to an unconscious person. Clean mouth with water.

Most important symptoms and effects, both acute and delayed

Symptoms

No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

SECTION 5: Firefighting measures

Suitable Extinguishing Media In case of fire chemical for firefighters (approved or

Use CO₂, dry chemical, or foam for extinction. (if applicable) and full protective gear.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Remove all sources of ignition. Use personal protective equipment as required.

Environmental precautions

Environmental precautions

See Section 12 for additional Ecological Information. Prevent product from entering drains.

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

May cause damage to organs through prolonged or repeated exposure. Contact with water liberates toxic, highly flammable gas.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Store at 4 °C.

Incompatible materials

None known based on information supplied.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure Guidelines

.

Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Column 1	Column 2	Column 3	Column 4
Trimethylarsin oxide 4964-14-1-		TWA: 0.5 mg/m3 As-	

Appropriate engineering controls

Engineering Controls

Showers

Eyewash stations

Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and Body Protection

Wear protective gloves and protective clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance

with current local regulations.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Physical State	Solid
Appearance	No information available
Odor	No information available
pH	No information available
Melting point/freezing point	185 °C
Boiling point	170.7 °C
Flash point	56.4 °C
Liquid Density	No information available
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	1.9 mmHg
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	2.32
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Solubility	Water (Slightly)
Colour	White to Off-White

SECTION 10: Stability and reactivity

Reactivity

Not applicable

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Contact with water liberates toxic, highly flammable gas.

Hazardous polymerization

No information available.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon oxides.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation

No data available.

Eye contact

No data available.

Skin Contact

No data available.

Ingestion

No data available.

Information on toxicological effects

Symptoms

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity

May cause adverse liver effects. Contains a known or suspected reproductive toxin. Target Organ Effects Reproductive System, Gastrointestinal tract (GI), Central nervous system, Respiratory system, Kidney, Liver, Skin. Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name ACGIH IARC NTP OSHA

Trimethylarsinoxide - Group

1 - X 4964-14-1

Numerical measures of toxicity - Product Information

Unknown acute toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)

100 mg/kg

ATEmix (dermal)

1100 mg/kg

ATEmix (inhalation-dust/mist)

0.5 mg/l

SECTION 12: Ecological information

Ecotoxicity

May cause long lasting harmful effects to aquatic life

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

SECTION 13: Disposal considerations

Disposal of wastes

Should not be released into the environment. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

SECTION 14: Transport information

DOT**UN/ID no**

UN3465

Hazard Class

6.1

Packing Group

III

Proper shipping name

Organoarsenic compound, solid, n.o.s.

Description

UN3465, Organoarsenic compound, solid, n.o.s. (Trimethylarsin oxide), 6.1, III

Emergency Response Guide Number

151

IMDG**UN/ID no**

UN3465

Hazard Class

6.1

Packing Group

III

Proper shipping name

Organoarsenic compound, solid, n.o.s.

Description

UN3465, Organoarsenic compound, solid, n.o.s. (Trimethylarsin oxide), 6.1, III, Marine pollutant

Special Provisions

223, 274

EmS-No

F-A, S-A

IATA**UN/ID no**

UN3465

Hazard Class

6.1

Packing Group

III

Proper shipping name

Organoarsenic compound, solid, n.o.s.

Description

UN3465, Organoarsenic compound, solid, n.o.s. (Trimethylarsin oxide), 6.1, III

ERG Code

6L

SECTION 15: Regulatory information

International Inventories

All of the components in the product are on the following Inventory lists

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

Chemical Book

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard

Yes

Chronic Health Hazard

No

Fire hazard

Yes

Sudden release of pressure hazard

No

Reactive hazard

No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Trimethylarsin oxide 4964-14-1		X		

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Trimethylarsin oxide 4964-14-1	X	Not Listed	X

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

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

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.