

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Arsen(III)-oxid Urteitersubstanz

Revision date: 02.01.2023

Product code: 20454

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

### 1.1. Product identifier

Arsen(III)-oxid Urteitersubstanz

Substance name: diarsenic trioxide; arsenic trioxide  
CAS No: 1327-53-3  
Index No: 033-003-00-0  
EC No: 215-481-4

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

#### Use of the substance/mixture

Laboratory chemicals  
Industrial uses: Uses of substances as such or in preparations at industrial sites  
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

#### Uses advised against

Do not use for private purposes (household).

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

Company name: AnalytiChem GmbH  
Street: Stempelstraße 6  
Place: D-47167 Duisburg  
Telephone: 0203/5194-0  
Telefax: 0203/5194-290  
e-mail: info@analytichem.de  
Contact person: Abteilung Produktsicherheit  
Telephone: 0203/5194-107/117  
e-mail: produktsicherheit@analytichem.de  
Internet: www.analytichem.de  
Responsible Department: Abteilung Produktsicherheit

### 1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

### Further Information

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Carc. 1A; H350  
Acute Tox. 2; H300  
Skin Corr. 1B; H314  
Aquatic Acute 1; H400  
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

Signal word: Danger

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**Pictograms:**



**Hazard statements**

- H300 Fatal if swallowed.
- H314 Causes severe skin burns and eye damage.
- H350 May cause cancer.
- H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

- P201 Obtain special instructions before use.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P405 Store locked up.

**Special labelling of certain mixtures**

Restricted to professional users.

**2.3. Other hazards**

No data available

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

**3.1. Substances**

Sum formula: As<sub>2</sub>O<sub>3</sub>  
Molecular weight: 197,84 g/mol

**Hazardous components**

CAS No	Chemical name	Quantity
	EC No      Index No      REACH No	
	Classification (Regulation (EC) No 1272/2008)	
1327-53-3	diarsenic trioxide; arsenic trioxide	100 %
	215-481-4      033-003-00-0	
	Carc. 1A, Acute Tox. 2, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1; H350 H300 H314 H400 H410	

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
1327-53-3	215-481-4	diarsenic trioxide; arsenic trioxide	100 %
		oral: LD50 = 14,6 mg/kg	

**Further Information**

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: diarsenic trioxide; arsenic trioxide  
This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: diarsenic trioxide; arsenic trioxide

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#### SECTION 4: First aid measures

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

###### General information

Self-protection of the first aider  
Call a physician immediately.

###### After inhalation

Provide fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Call a physician immediately.

###### After contact with skin

Wash immediately with: Water  
Take off immediately all contaminated clothing and wash it before reuse.  
Call a physician immediately.

###### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Protect uninjured eye.

###### After ingestion

Rinse mouth immediately and drink plenty of water.  
Call a physician immediately.

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

corrosive, Cough  
Dyspnoea, Gastrointestinal complaints  
Headache, Spasms  
Risk of serious damage to eyes.

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

No data available

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

###### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

###### Unsuitable extinguishing media

no restriction

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

Non-combustible solids  
Hazardous combustion products  
In case of fire may be liberated:  
Metal oxide smoke, toxic

##### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.  
Avoid contact with skin, eyes and clothes.

###### Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Use water spray jet to protect personnel and to cool endangered containers.

#### SECTION 6: Accidental release measures

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

##### **For non-emergency personnel**

- Provide adequate ventilation.
- Use personal protection equipment.
- Avoid contact with skin, eyes and clothes.
- Remove persons to safety.
- Emergency procedures
- Do not breathe dust/fume/gas/mist/vapours/spray.

##### **For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

##### **For containment**

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Take up carefully when dry. Take up dust-free and set down dust-free.

##### **For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

##### **Other information**

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

## **SECTION 7: Handling and storage**

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

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

- Read label before use. Handle and open container with care.
- When using do not eat, drink, smoke, sniff. Use personal protection equipment.
- Provide adequate ventilation. Avoid contact with skin, eyes and clothes.
- Do not breathe dust. Use extractor hood (laboratory).

##### **Advice on protection against fire and explosion**

Usual measures for fire prevention.

##### **Advice on general occupational hygiene**

- Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately.
- Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

##### **Further information on handling**

- Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary.
- Take off immediately all contaminated clothing and wash it before reuse.

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

##### **Requirements for storage rooms and vessels**

- Keep container tightly closed.

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Store in a place accessible by authorized persons only.

**Further information on storage conditions**

Store in a well-ventilated place.

Keep container dry.

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

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
-	Arsenic acid and its salts (as As) (Inhalable Fraction)	-	0.01		TWA (8 h)	

**8.2. Exposure controls**

**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

goggles

Wear eye/face protection.

**Hand protection**

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Recommended glove articles: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Recommended glove articles: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Skin protection**

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

**Respiratory protection**

Respiratory protection necessary at: dust formation

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

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**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state:	solid
Colour:	white - beige
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	312,3 °C
Boiling point or initial boiling point and boiling range:	457,2 °C
Flammability	
Solid/liquid:	No data available
Gas:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	No data available
Viscosity / kinematic:	No data available
Water solubility: (at 20 °C)	37 g/L
Solubility in other solvents	
No data available	
Partition coefficient n-octanol/water:	No data available
Vapour pressure: (at 20 °C)	0 hPa
Vapour pressure:	No data available
Density (at 20 °C):	3,738 g/cm <sup>3</sup>
Bulk density:	2250 kg/m <sup>3</sup>
Relative vapour density:	No data available

**9.2. Other information**

**Information with regard to physical hazard classes**

Explosive properties	
No data available	
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available
Oxidizing properties	
Oxidizing	

**Other safety characteristics**

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	100%
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	
Viscosity / dynamic:	No data available
Flow time:	No data available

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**Further Information**

Corrosive to metals.

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Oxidising agent, strong

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

In case of fire may be liberated:

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

Fatal if swallowed.

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
1327-53-3	diarsenic trioxide; arsenic trioxide					
	oral	LD50 mg/kg	14,6	Rat	GESTIS	

**Irritation and corrosivity**

Causes severe skin burns and eye damage.

Causes serious eye damage.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

May cause cancer. (diarsenic trioxide; arsenic trioxide)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

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#### Specific effects in experiment on an animal

No data available

#### Additional information on tests

No data available

#### Practical experience

No data available

#### 11.2. Information on other hazards

##### Other information

No data available

##### Further information

No data available

### SECTION 12: Ecological information

#### 12.1. Toxicity

No data available

#### 12.2. Persistence and degradability

No data available

#### 12.3. Bioaccumulative potential

No data available

#### 12.4. Mobility in soil

No data available

#### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

No data available

#### 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

#### 12.7. Other adverse effects

Discharge into the environment must be avoided.

##### Further information

Do not allow to enter into surface water or drains.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

##### Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	UN 1561
<u>14.2. UN proper shipping name:</u>	ARSENIC TRIOXIDE
<u>14.3. Transport hazard class(es):</u>	6.1
<u>14.4. Packing group:</u>	II



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Hazard label: 6.1  
 Classification code: T5  
 Limited quantity: 500 g  
 Excepted quantity: E4  
 Transport category: 2  
 Hazard No: 60  
 Tunnel restriction code: D/E

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 1561  
**14.2. UN proper shipping name:** ARSENIC TRIOXIDE  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** II  
 Hazard label: 6.1  
 Classification code: T5  
 Special Provisions: 802  
 Limited quantity: 500 g  
 Excepted quantity: E4

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 1561  
**14.2. UN proper shipping name:** ARSENIC TRIOXIDE  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** II  
 Hazard label: 6.1  
 Special Provisions: -  
 Limited quantity: 500 g  
 Excepted quantity: E4  
 EmS: F-A, S-A

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 1561  
**14.2. UN proper shipping name:** ARSENIC TRIOXIDE  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** II  
 Hazard label: 6.1  
 Limited quantity Passenger: 1 kg  
 Passenger LQ: Y644  
 Excepted quantity: E4  
 IATA-packing instructions - Passenger: 669  
 IATA-max. quantity - Passenger: 25 kg  
 IATA-packing instructions - Cargo: 676  
 IATA-max. quantity - Cargo: 100 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: Yes  
 Danger releasing substance: diarsenic trioxide; arsenic trioxide

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Authorisations (REACH, annex XIV):

This substance has been listed as SVHC (substance of very high concern) in the Candidate List according to Article 59 of REACH.

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Restrictions on use (REACH, annex XVII):

Entry 19, Entry 75

Information according to 2012/18/EU (SEVESO III): 8 Arsenic trioxide (1327-53-3)

Additional information: H2, E1

#### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): 3 - highly hazardous to water

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,10,11,12,14,15.

#### Relevant H and EUH statements (number and full text)

H300	Fatal if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H350	May cause cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

#### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.