SAFETY DATA SHEET
according to Regulation (EC) No 1907/2006 (REACH) as amended

Arsenic(III) oxide

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

1.1. Product identifier
Arsenic(III) oxide

Substance / mixture
substance

Chemical name
Arsenic trioxide

CAS number
1327-53-3

Index number
033-003-00-0

EC (EINECS) number
215-481-4

Other substance name
Arsenic trioxide

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

Substance's intended use
Chemical production, analytical chemistry, laboratory synthesis, industrial applications.

Substance uses advised against
The product should not be used in ways other than those referred in Section 1.

Chemical safety report

1.3. Details of the supplier of the safety data sheet

Supplier
Ing. Petr Švec - PENTA s.r.o.
Radiová 1122/1, Praha 10, 102 00 Czech Republic

Identification number (CRN)
02096013

VAT Reg No
CZ02096013

Phone
+420 226 060 681

E-mail
info@pentachemicals.eu

Web address
www.pentachemicals.eu

Competent person responsible for the safety data sheet

Name
Ing. Petr Švec - PENTA s.r.o.

E-mail
info@pentachemicals.eu

1.4. Emergency telephone number

National Health Service (NHS) 111

National poisoning information centre Scotland, NHS 24: 111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the substance in accordance with Regulation (EC) No 1272/2008

The substance is classified as dangerous.

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

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse effects on human health and the environment

Fatal if swallowed. Causes severe skin burns and eye damage. May cause cancer. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
2.2. Label elements

Hazard pictogram

 Signal word
Danger

Dangerous substance
Arsenic trioxide (Index: 033-003-00-0; CAS: 1327-53-3)

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.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a 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 information
For professional users only.

2.3. Other hazards
Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization
The substance specified below.

<table>
<thead>
<tr>
<th>Identification numbers</th>
<th>Substance name</th>
<th>Content in %</th>
<th>Classification according to Regulation (EC) No 1272/2008</th>
<th>Note.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index: 033-003-00-0</td>
<td>substance main component</td>
<td>&gt;99</td>
<td>Acute Tox. 2, H300 Skin Corr. 1B, H314 Carc. 1A, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
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<tr>
<td>CAS: 1327-53-3</td>
<td>Arsenic trioxide</td>
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<tr>
<td>EC: 215-481-4</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes
1 The substance is included in Annex XIV of the REACH Regulation
Full text of all classifications and hazard statements is given in the section 16.
SECTION 4: First aid measures

4.1. Description of first aid measures
Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled
Take care of your own safety, do not let the affected person walk! Terminate the exposure immediately; move the affected person to fresh air. Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

If on skin
Remove contaminated clothes. Take off any rings, watches, bracelets before or during washing if worn in the contaminated areas of the skin. Depending on the situation, call the medical rescue service and always ensure medical treatment. Rinse contaminated areas with a flow of water, lukewarm at best, for 10-30 minutes; do not use any brush, soap or neutralizers. Rinse skin with water/shower. Rinse cautiously with water for several minutes.

If in eyes
Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

If swallowed
INDUCE VOMITING! Vomiting should be induced in the person only if conscious, within 1 hour from ingestion. If in doubt whether vomiting should be induced, contact the Toxicological Information Centre and give information about the substances or composition of the product as provided on the original packaging or in the safety data sheet of the product. FOLLOWING INGESTION OF TOXIC OR HIGHLY TOXIC SUBSTANCES, GIVE 10-20 CRUSHED TABLETS OF ACTIVATED CARBON, MIXED IN WATER, WITHIN NO LATER THAN 5 MINUTES - irrespective of whether vomiting could be induced. Call medical rescue service.

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

If inhaled
Inhaling dust can cause corrosion of the breathing system.

If on skin
Causes severe skin burns.

If in eyes
Causes serious eye damage.

If swallowed
Corrosion of the digestion system can occur.

4.3. Indication of any immediate medical attention and special treatment needed
Symptomatic treatment.
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SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable extinguishing media
Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media
Water - full jet.

5.2. Special hazards arising from the substance or mixture
In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters
Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale dust. Prevent contact with skin and eyes.

6.2. Environmental precautions
Do not allow to enter drains. Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up
Place the product mechanically in an appropriate manner. Dispose of the collected material according to the instructions in the section 13.

6.4. Reference to other sections
See the Section 7, 8 and 13.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Do not inhale dust. Prevent contact with skin and eyes. Obtain special instructions before use. Do not eat, drink or smoke when using this product. Wash hands and exposed parts of the body thoroughly after handling. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities
Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Store locked up.

7.3. Specific end use(s)
not available

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
none

8.2. Exposure controls
Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection
Protective goggles or face shield (based on the nature of the work performed).

Skin protection
Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.
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Respiratory protection
Use a mask with anti-dust filter when the exposition limits of the substances are exceeded or at the place with insufficient ventilation.

Thermal hazard
Not available.

Environmental exposure controls
Observe usual measures for protection of the environment, see Section 6.2. Collect spillage.

SECTION 9: Physical and chemical properties
9.1. Information on basic physical and chemical properties
Appearance
Physical state solid at 20°C
Color white
Odour without fragrance
Odour threshold data not available
pH data not available
Melting point/freezing point 312.3 °C
Initial boiling point and boiling range 457.2 °C
Flash point data not available
Evaporation rate data not available
Flammability (solid, gas) data not available
Upper/lower flammability or explosive limits
flammability limits data not available
explosive limits data not available
Vapour pressure data not available
Vapour density data not available
Relative density data not available
Solubility(ies)
solubility in water data not available
solubility in fats data not available
Partition coefficient: n-octanol/water data not available
Auto-ignition temperature data not available
Decomposition temperature data not available
Viscosity data not available
Explosive properties data not available
Oxidising properties data not available
9.2. Other information
Density 3.74 g/cm³
Ignition temperature data not available

SECTION 10: Stability and reactivity
10.1. Reactivity
The substance is non-flammable.

10.2. Chemical stability
The product is stable under normal conditions.

10.3. Possibility of hazardous reactions
Unknown.
10.4. Conditions to avoid
The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials
Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products
Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
No toxicological data is available for the substance.

Acute toxicity
Fatal if swallowed.

Skin corrosion/irritation
Causes severe skin burns and eye damage.

Serious eye damage/irritation
Causes severe skin burns and eye damage.

Respiratory or skin sensitisation
Based on available data the classification criteria are not met.

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

Carcinogenicity
May cause cancer.

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

Toxicity for specific target organ - single exposure
Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure
Based on available data the classification criteria are not met.

Aspiration hazard
Based on available data the classification criteria are not met.

SECTION 12: Ecological information
12.1. Toxicity

Acute toxicity
Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability
Data not available.

12.3. Bioaccumulative potential
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Not available.

12.4. **Mobility in soil**
Not available.

12.5. **Results of PBT and vPvB assessment**
Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. **Other adverse effects**
Not available.

**SECTION 13: Disposal considerations**

13.1. **Waste treatment methods**
Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

**Waste management legislation**

**SECTION 14: Transport information**

14.1. **UN number**
UN 1561

14.2. **UN proper shipping name**
ARSENIC TRIOXIDE

14.3. **Transport hazard class(es)**
6.1 Toxic substances

14.4. **Packing group**
II - substances presenting medium danger

14.5. **Environmental hazards**
not available

14.6. **Special precautions for user**
Reference in the Sections 4 to 8.

14.7. **Transport in bulk according to Annex II of Marpol and the IBC Code**
not available

**Additional information**

- Hazard Identification No. 60 (Kemler Code)
- UN number 1561
- Classification code T5
- Safety signs 6.1+hazardous for the environment
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**Air transport - ICAO/IATA**
- Packaging instructions passenger: 669
- Cargo packaging instructions: 676

**Marine transport - IMDG**
- EmS (emergency plan): F-A, S-A

### SECTION 15: Regulatory information

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

**15.2. Chemical safety assessment**
Not available

### SECTION 16: Other information

**A list of standard risk phrases used in the safety data sheet**
- **H300**: Fatal if swallowed.
- **H314**: Causes severe skin burns and eye damage.
- **H350**: May cause cancer.
- **H400**: Very toxic to aquatic life.
- **H410**: Very toxic to aquatic life with long lasting effects.

**Guidelines for safe handling used in the safety data sheet**
- **P280**: Wear protective gloves/protective clothing/eye protection/face protection.
- **P301+P310**: IF SWALLOWED: Immediately call a 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.
- **P201**: Obtain special instructions before use.
- **P273**: Avoid release to the environment.

**Other important information about human health protection**
The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

**Key to abbreviations and acronyms used in the safety data sheet**
- **ADR**: European agreement concerning the international carriage of dangerous goods by road
- **BCF**: Bioconcentration Factor
- **CAS**: Chemical Abstracts Service
- **CLP**: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
- **DNEL**: Derived no-effect level
- **EC**: Identification code for each substance listed in EINECS
- **EC50**: Concentration of a substance when it is affected 50% of the population
- **EINECS**: European Inventory of Existing Commercial Chemical Substances
- **EmS**: Emergency plan
- **EU**: European Union
- **IATA**: International Air Transport Association
- **IBC**: International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
- **IC50**: Concentration causing 50% blockade
- **ICAO**: International Civil Aviation Organization
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IMDG International Maritime Dangerous Goods
INCI International Nomenclature of Cosmetic Ingredients
ISO International Organization for Standardization
IUPAC International Union of Pure and Applied Chemistry
LC50 Lethal concentration of a substance in which it can be expected death of 50% of the population
LD50 Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEC Lowest observed adverse effect concentration
LOAEL Lowest observed adverse effect level
log Kow Octanol-water partition coefficient
MARPOL International Convention for the Prevention of Pollution From Ships
NOAEC No observed adverse effect concentration
NOAEL No observed adverse effect level
NOEC No observed effect concentration
NOEL No observed effect level
OEL Occupational Exposure Limits
PBT Persistent, Bioaccumulative and Toxic
PNEC Predicted no-effect concentration
ppm Parts per million
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals
RID Agreement on the transport of dangerous goods by rail
UN Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB Substances of unknown or variable composition, complex reaction products or biological materials
VOC Volatile organic compounds
vPvB Very Persistent and very Bioaccumulative

Acute Tox. Acute toxicity
Aquatic Acute Hazardous to the aquatic environment
Aquatic Chronic Hazardous to the aquatic environment
Carc. Carcinogenicity
Skin Corr. Skin corrosion

Training guidelines
Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use
not available

Information about data sources used to compile the Safety Data Sheet

More information
Classification procedure - calculation method.

Statement
The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.
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