

Printing date 07/30/2016

Reviewed on 07/30/2016

1 Identification

- **Product name**
- **Trade name:** Tris(dimethylamino)arsine, 99%
- **Item number:** 33-5000
- **CAS Number:**
6596-96-9
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Strem Chemicals, Inc.
7 Mulliken Way
NEWBURYPORT, MA 01950
USA
info@strem.com
- **Information department:** Technical Department
- **Emergency telephone number:**
EMERGENCY: CHEMTREC: + 1 (800) 424-9300
During normal opening times: +1 (978) 499-1600

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.

Acute Tox. 2 H310 Fatal in contact with skin.

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 Health hazard

Muta. 1A H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

- **Label elements**
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS06 GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Tris(dimethylamino)arsine, 99%
- **Hazard statements**
H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.

(Contd. on page 2)

Printing date 07/30/2016

Reviewed on 07/30/2016

Trade name: Tris(dimethylamino)arsine, 99%

(Contd. of page 1)

• **Precautionary statements**

- P231 Handle under inert gas.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P422 Store contents under inert gas.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Classification system:**

• **NFPA ratings (scale 0 - 4)**



Health = 4
Fire = 0
Reactivity = 0

The substance demonstrates unusual reactivity with water.

• **HMIS-ratings (scale 0 - 4)**



Health = 4
Fire = 0
Reactivity = 0

• **Other hazards**

• **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
• **vPvB:** Not applicable.

3 Composition/information on ingredients

• **Chemical characterization: Substances**

• **CAS No. Description**

6596-96-9 Tris(dimethylamino)arsine, 99%

4 First-aid measures

• **Description of first aid measures**

• **General information:**

Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.

• **After inhalation:**

Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.

• **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

• **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

• **After swallowing:** Do not induce vomiting; immediately call for medical help.

• **Information for doctor:**

• **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

Printing date 07/30/2016

Reviewed on 07/30/2016

Trade name: Tris(dimethylamino)arsine, 99%

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Sand. Do not use water.
CO2, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:** Handle under inert gas.
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Only handle and refill product in closed systems.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** Store contents under inert gas.
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

US
(Contd. on page 4)

Printing date 07/30/2016

Reviewed on 07/30/2016

Trade name: Tris(dimethylamino)arsine, 99%

(Contd. of page 3)

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Liquid
Color:	Colorless
Odor:	Amine-like
Odor threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: no data °C

(Contd. on page 5)

Safety Data Sheet according to OSHA HCS

Printing date 07/30/2016

Reviewed on 07/30/2016

Trade name: Tris(dimethylamino)arsine, 99%

(Contd. of page 4)

Boiling point/Boiling range:	55 /10mm °C (131 /50mm °F)
· Flash point:	56 °C (133 °F)
· Flammability (solid, gaseous):	Not determined.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	no data hPa
· Density at 20 °C (68 °F):	1.1248 g/cm ³ (9.386 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC content:	0.0 g/l / 0.00 lb/gl
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Dermal	LD50	15 mg/kg (mouse)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.

(Contd. on page 6)

Safety Data Sheet according to OSHA HCS

Printing date 07/30/2016

Reviewed on 07/30/2016

Trade name: Tris(dimethylamino)arsine, 99%

(Contd. of page 5)

- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not known to be hazardous to water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|----------------------------------|-----------------------------------|
| · UN-Number | |
| · DOT, IMDG, IATA | UN1556 |
| · UN proper shipping name | |
| · DOT, IATA | Arsenic compounds, liquid, n.o.s. |
| · IMDG | ARSENIC COMPOUND, LIQUID, N.O.S. |

(Contd. on page 7)

US

Printing date 07/30/2016

Reviewed on 07/30/2016

Trade name: Tris(dimethylamino)arsine, 99%

(Contd. of page 6)

· **Transport hazard class(es)**

· **DOT**



· **Class** 6.1 Toxic substances
· **Label** 6.1

· **IMDG**



· **Class** 6
· **Label** 6.1

· **IATA**



· **Class** 6.1 Toxic substances
· **Label** 6.1

· **Packing group**

· **DOT, IMDG, IATA** II

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special precautions for user**

Not applicable.

· **EMS Number:**

F-A,S-A

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Segregation Code**

SG70 For arsenic sulphides, "separated from" acids

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

· **IMDG**

· **Limited quantities (LQ)**

.1L

· **Excepted quantities (EQ)**

Code: E4

Maximum net quantity per inner packaging: 1 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1556 ARSENIC COMPOUNDS, LIQUID, N.O.S., 6.1, II

(Contd. on page 8)

Printing date 07/30/2016

Reviewed on 07/30/2016

Trade name: Tris(dimethylamino)arsine, 99%

(Contd. of page 7)

15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

Substance is not listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS06 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Tris(dimethylamino)arsine, 99%

· **Hazard statements**

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.

H340 May cause genetic defects.

H350 May cause cancer.

· **Precautionary statements**

P231 Handle under inert gas.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

(Contd. on page 9)

Safety Data Sheet according to OSHA HCS

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Trade name: Tris(dimethylamino)arsine, 99%

(Contd. of page 8)

P303+P361+P353 *If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.*

P403+P233 *Store in a well-ventilated place. Keep container tightly closed.*

P422 *Store contents under inert gas.*

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

• **National regulations:**

• **Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group I (extremely dangerous).

Carcinogenic hazardous material group II (very dangerous).

Carcinogenic hazardous material group III (dangerous).

• **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Department issuing SDS:** Technical Department.

• **Contact:** Technical Director

• **Date of preparation / last revision** 07/30/2016 / -

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 2: Acute toxicity, Hazard Category 2

Muta. 1A: Germ cell mutagenicity, Hazard Category 1A

Carc. 1A: Carcinogenicity, Hazard Category 1A