SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification

Product Description: Tetramethyltin
Cat No.: 163980000; 163980100; 163980500
Synonyms: Tetramethylstannane.
CAS-No: 594-27-4
EC-No.: 209-833-6
Molecular Formula: C4 H12 Sn

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

Recommended Use: Laboratory chemicals.
Uses advised against: No Information available

1.3. Details of the supplier of the safety data sheet

Company: Acros Organics BVBA
Janssen Pharmaceuticalaan 3a
2440 Geel, Belgium
E-mail address: begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11
Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC Tel. No. US: 001-800-424-9300 / Europe: 001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards
Flammable liquids: Category 2

Health hazards
Acute oral toxicity: Category 2
Acute dermal toxicity: Category 1
Acute Inhalation Toxicity - Vapors: Category 2

Environmental hazards
Acute aquatic toxicity: Category 1
Chronic aquatic toxicity: Category 1

2.2. Label elements
Signal Word  
**Danger**

**Hazard Statements**
- H225 - Highly flammable liquid and vapor
- H300 - Fatal if swallowed
- H310 - Fatal in contact with skin
- H330 - Fatal if inhaled
- H410 - Very toxic to aquatic life with long lasting effects

**Precautionary Statements**
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
- P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P330 - Rinse mouth
- P310 - Immediately call a POISON CENTER or doctor/ physician
- P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

**2.3. Other hazards**
No information available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
<th>CLP Classification - Regulation (EC) No 1272/2008</th>
</tr>
</thead>
</table>
| Stannane, tetramethyl-     | 594-27-4| EEC No. 209-833-6| >95      | **Flam. Liq. 2 (H225)**  
|                            |         |                 |          | **Acute Tox. 2 (H300)**  
|                            |         |                 |          | **Acute Tox. 1 (H310)**  
|                            |         |                 |          | **Acute Tox. 2 (H330)**  
|                            |         |                 |          | **Aquatic Chronic 1 (H400)**  
|                            |         |                 |          | **Aquatic Acute 1 (H410)**  |

Full text of Hazard Statements: see section 16

### SECTION 4: FIRST AID MEASURES

**4.1. Description of first aid measures**

**General Advice**
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Ingestion**
Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Inhalation**
Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth
resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Protection of First-aiders
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed
Breathing difficulties. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing; Causes central nervous system depression

4.3. Indication of any immediate medical attention and special treatment needed
Notes to Physician
Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media
Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

Extinguishing media which must not be used for safety reasons
No information available.

5.2. Special hazards arising from the substance or mixture
Extremely flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products
Thermal decomposition can lead to release of irritating gases and vapors, Carbon monoxide (CO), Carbon dioxide (CO₂).

5.3. Advice for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2. Environmental precautions
Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

6.3. Methods and material for containment and cleaning up
Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

6.4. Reference to other sections
Refer to protective measures listed in Sections 8 and 13.
SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not breathe vapors or spray mist. Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not ingest. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>European Union</th>
<th>The United Kingdom</th>
<th>Belgium</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stannane, tetramethyl-</td>
<td></td>
<td>STEL: 0.2 mg/m³ 15 min TWA: 0.1 mg/m³ 8 hr Skin</td>
<td>TWA / VME: 0.1 mg/m³ (8 heures), STEL / VLCT: 0.2 mg/m³.</td>
<td>STEL / VLA-EC: 0.2 mg/m³ (15 minutos), TWA / VLA-ED: 0.1 mg/m³ (8 horas) Piel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Portugal</th>
<th>The Netherlands</th>
<th>Finland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stannane, tetramethyl-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA: 0.1 mg/m³ (8 Stunden). MAK Höhepunkt: 0.004 ppm Höhepunkt: 0.02 mg/m³ Höhepunkt: 0.2 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL: 0.2 mg/m³ 15 minutos TWA: 0.1 mg/m³ 8 horas Piel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Austria</th>
<th>Denmark</th>
<th>Switzerland</th>
<th>Poland</th>
<th>Norway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stannane, tetramethyl-</td>
<td>Haut</td>
<td>Haut/Peau</td>
<td>Haut/Peau</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MAK-KZW: 0.2 mg/m³ 15 Minuten</td>
<td>STEL: 0.2 mg/m³ 15 Minuten TWA: 0.1 mg/m³ 8 Stunden</td>
<td></td>
<td>TWA: 0.1 mg/m³ 8 timer Hud</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MAK-TMW: 0.1 mg/m³ 8 Stunden</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biological limit values
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS70 General methods for sampling airborne gases and vapours
MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas
chromatography
MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Derived No Effect Level (DNEL) | No information available
---|---
**Route of exposure** | **Acute effects (local)** | **Acute effects (systemic)** | **Chronic effects (local)** | **Chronic effects (systemic)**
Oral | | | | |
Dermal | | | | |
Inhalation | | | | |

Predicted No Effect Concentration (PNEC) | No information available.

8.2. Exposure controls

**Engineering Measures**
Ensure adequate ventilation, especially in confined areas. Ventilation systems. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

**Personal protective equipment**

**Eye Protection**
Safety glasses with side-shields Goggles (European standard - EN 166)

**Hand Protection**
Protective gloves

**Skin and body protection**
Long sleeved clothing

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
(Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

**Respiratory Protection**
No protective equipment is needed under normal use conditions.

**Large scale/emergency use**
Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
**Recommended Filter type:** Organic gases and vapours filter Type A Brown conforming to EN14387

**Small scale/Laboratory use**
Maintain adequate ventilation Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls**
Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1. Information on basic physical and chemical properties
SAFETY DATA SHEET

Tetramethyltin

Revision Date 28-Sep-2015

9.2. Other information

Molecular Formula  C4 H12 Sn
Molecular Weight  178.83

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
None known, based on information available

10.2. Chemical stability
Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous Polymerization  Hazardous polymerization does not occur.
Hazardous Reactions  None under normal processing.

10.4. Conditions to avoid

10.5. Incompatible materials
Strong oxidizing agents. Acids.

10.6. Hazardous decomposition products
Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

ACR16398
SAFETY DATA SHEET

(a) acute toxicity;  
   Oral  Category 2  
   Dermal  Category 1  
   Inhalation  Category 2  

(b) skin corrosion/irritation;  No data available  

(c) serious eye damage/irritation;  No data available  

(d) respiratory or skin sensitization;  
   Respiratory  No data available  
   Skin  No data available  

(e) germ cell mutagenicity;  No data available  

(f) carcinogenicity;  No data available  
   There are no known carcinogenic chemicals in this product  

(g) reproductive toxicity;  No data available  

(h) STOT-single exposure;  No data available  

(i) STOT-repeated exposure;  No data available  
   Target Organs  Blood, Central nervous system (CNS), Kidney, Liver, Urinary Tract.  

(j) aspiration hazard;  No data available  

Other Adverse Effects  The toxicological properties have not been fully investigated.  

Symptoms / effects, both acute and delayed  Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing: Causes central nervous system depression  

SECTION 12: ECOLOGICAL INFORMATION  

12.1. Toxicity  
Ecotoxicity effects  Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.  

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Fish</th>
<th>Water Flea</th>
<th>Freshwater Algae</th>
<th>Microtox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stannane, tetramethyl-</td>
<td>LC50: 6.44 mg/L/48h (Oryzias latipes)</td>
<td>EC50: 40 mg/L/24h</td>
<td>Growth inhibition EC50: &gt; 0.5 mg/L/72h (Skeletonema costatum)</td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability  
Persistence  Persistence is unlikely, based on information available.  
Degradation in sewage treatment plant  Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.  

12.3. Bioaccumulative potential  Bioaccumulation is unlikely  

12.4. Mobility in soil  The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air  

12.5. Results of PBT and vPvB  No data available for assessment.
SAFETY DATA SHEET

assessments

12.6. Other adverse effects

Endocrine Disruptor Information
This product does not contain any known or suspected endocrine disruptors

Persistent Organic Pollutant
This product does not contain any known or suspected substance

Ozone Depletion Potential
This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products
Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging
Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

European Waste Catalogue (EWC)
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

Other Information
Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number
UN3384

14.2. UN proper shipping name
TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S

14.3. Transport hazard class(es)
6.1

Subsidiary Hazard Class
3

14.4. Packing group
I

ADR

14.1. UN number
UN3384

14.2. UN proper shipping name
TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S

14.3. Transport hazard class(es)
6.1

Subsidiary Hazard Class
3

14.4. Packing group
I

IATA

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards
Dangerous for the environment
Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6. Special precautions for user
No special precautions required

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

ACR16398
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

<table>
<thead>
<tr>
<th>International Inventories</th>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>AICS</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stannane, tetramethyl-</td>
<td>209-833-6</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

National Regulations

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.
Take note of Dir 94/33/EC on the protection of young people at work
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full Text of H-/EUH-Statements Referred to Under Section 3

H225 - Highly flammable liquid and vapor
H300 - Fatal if swallowed
H310 - Fatal in contact with skin
H330 - Fatal if inhaled
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Legend

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic
ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor
Key literature references and sources for data
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical incident response training.
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.
SAFETY DATA SHEET

Tetramethylin

Creation Date 08-Sep-2014
Revision Date 28-Sep-2015
Revision Summary Update to Format.

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

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet