Section 1 - Product and Company Information

Product Name: TETRAMETHYLTIN
Product Number: 87960
Brand: FLUKA
Company: Sigma-Aldrich Canada, Ltd
Address: 2149 Winston Park Drive
Oakville ON L6H 6J8 CA
Technical Phone: 9058299500
Fax: 9058299292
Emergency Phone: 800-424-9300

Section 2 - Composition/Information on Ingredient

Substance Name: TETRAMETHYLTIN
CAS #: 594-27-4
SARA 313: No
Formula: C4H12Sn
Synonyms: Tetramethylcin (Czech) * Tetramethylstannane * Tetramethyl tin * Tin, tetramethyl-
RTECS Number: WH8630000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Irritating to eyes, respiratory system and skin. Very toxic to aquatic organisms. Very toxic by inhalation, in contact with skin and if swallowed.
Readily absorbed through skin. Target organ(s): Kidneys. Liver.

HMIS RATING
HEALTH: 3*
FLAMMABILITY: 3
REACTIVITY: 0

NFPA RATING
HEALTH: 3
FLAMMABILITY: 3
REACTIVITY: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.
INHALATION EXPOSURE
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT
10.4 °F   - 12.0 °C   Method: closed cup

AUTOIGNITION TEMP
N/A

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep container closed. Keep away from heat, sparks, and open flame.
Store at 2-8°C

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Use only in a chemical fume hood.

PERSONAL PROTECTIVE EQUIPMENT
Biohazard: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a face-supplied air respirator.

Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash contaminated clothing before reuse. Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS

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<th>Country</th>
<th>Source</th>
<th>Type</th>
<th>Value</th>
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<td>ACGIH</td>
<td>TWA</td>
<td>0.1 MG(SN)/M3</td>
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<td></td>
<td>STEL</td>
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Remarks: Skin

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<td>USA</td>
<td>OSHA.</td>
<td>PEL</td>
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<td>New Zealand</td>
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Remarks: check ACGIH TLV

USA NIOSH       TWA 0.1 MG(SN)/M3

Section 9 - Physical/Chemical Properties

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Section 10 - Stability and Reactivity

STABILITY
Stable: Stable.
Materials to Avoid: Acids, Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Tin/tin oxides.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: Causes skin irritation.
Skin Absorption: Readily absorbed through skin. May be fatal if absorbed through skin.
Eye Contact: Causes eye irritation.
Inhalation: May be fatal if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
Ingestion: May be fatal if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)
Cardiovascular system.

SIGNS AND SYMPTOMS OF EXPOSURE
General signs of toxicity for overexposure to tetraalkyl tin compounds include muscular weakness and paralysis, leading to respiratory failure, tremors, convulsive movements, closure of the eyelids, and photophobia. Histologically, tetraalkyl tin compounds show a decrease in cytoplasmic basophilia of the liver, chromatolysis of the Purkinje cells of the cerebellum, and increase in the water content of the brain and spinal cord. Nausea, headache, and vomiting. Exposure can cause:

TOXICITY DATA

Intraperitoneal
Mouse
18 MG/KG
LD50

CHRONIC EXPOSURE - CARCINOGEN
Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

ACGIH CARCINOGEN LIST
Rating: A4

Section 12 - Ecological Information

No data available.
Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: Toxic by inhalation liquid, flammable, n.o.s.
UN#: 3384
Class: 6.1
Packing Group: Packing Group I
Hazard Label: Poison inhalation hazard
Hazard Label: Flammable liquid
PIH: Zone B

IATA
Proper Shipping Name: Toxic by inhalation liquid, flammable, n.o.s.
IATA UN Number: 3384
Hazard Class: 6.1
Packing Group: I
Not Allowed - Aircraft: Not permitted for air transport.

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION
Symbol of Danger: T+-N
Indication of Danger: Very toxic. Dangerous for the environment.
R: 26/27/28-50/53
Risk Statements: Very toxic by inhalation, in contact with skin and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S: 26-27-28-45-60-61
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of soap-suds. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

US CLASSIFICATION AND LABEL TEXT
Indication of Danger: Flammable (USA) Highly Flammable (EU).
Highly Toxic (USA) Very Toxic (EU). Dangerous for the environment.
Risk Statements: Irritating to eyes, respiratory system and skin. Very toxic to aquatic organisms. Very toxic by inhalation, in contact with skin and if swallowed.
Safety Statements: Keep away from sources of ignition – no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of soap-suds. Wear suitable protective clothing. In case of accident or if you feel unwell, seek medical advice immediately.
medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.
US Statements: Readily absorbed through skin. Target organ(s): Kidneys. Liver.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: Yes

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.