Section 1 - Product and Company Information

Product Name                 DIBUTYL Tin DILAURATE, 95%
Product Number               291234
Brand                        ALDRICH
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

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIBUTYL Tin DILAURATE</td>
<td>77-58-7</td>
<td>No</td>
</tr>
</tbody>
</table>

Formula                     C32H64O4Sn
Synonyms                    Bis(lauroyloxy)di(n-butyl)stannane * Butynorate *
                            Cata-Chek 820 * Davainex * DBTL *
                            Dibutylbis(laurato)tin *
                            Dibutylbis(lauroyloxy)tin * Dibutylstannium
dilaurate * Dibutyltin dilaurate * Dibutyltin
n-dodecanoate * Dibutyltin laurate *
                            Dibutyl-zinn-dilaurat (German) * DXR 81 * Fomrez
                            sul-4 * Kosmos 19 * KS 20 * Lankromark LT 173 *
                            Laudran di-n-butylcinincity (Czech) * Lauric acid,
dibutylstannylene salt * Lauric acid, dibutyltin
deriv. * Laustan-B * Mark 1038 * Mark BT 11 *
                            Mark BT 18 * Neostann U 100 * Ongrostab BLTM * SM
                            2014C * Stabilizer D-22 * Stanclere DBTL *
                            Stannane, bis(dodecanoyloxy) di-n-butyl- *
                            Stannane, bis(lauroyloxy) dibutyl- * Stannane,
dibutylbis((1-oxododecyl)oxy)- * Stavincor 1200
                            SN * Therm chek 820 * Thermolite T 12 * Tin,
dibutylbis(lauroyloxy)- * Tin dibutyl dilaurate *
                            Tin, di-n-butyl-, di(dodecanoate) * Tinostat * TN
                            12 * TN 12 (catalyst) * TVS Tin Lau * TVS-TL 700

RTECS Number:               WH7000000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Highly Toxic (USA) Very Toxic (EU).
Harmful if swallowed. Very toxic by inhalation. Irritating to eyes
and skin. Very toxic to aquatic organisms, may cause long-term
adverse effects in the aquatic environment.
Target organ(s): G.I. System. Liver.

HMIS RATING
HEALTH: 3*
FLAMMABILITY: 1
**REACTIVITY: 0**

**NFPA RATING**
- **HEALTH: 4**
- **FLAMMABILITY: 1**
- **REACTIVITY: 0**

*additional chronic hazards present.*

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

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### Section 4 - First Aid Measures

**ORAL EXPOSURE**
- If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**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.

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### Section 5 - Fire Fighting Measures

**FLASH POINT**
- 235 °F  113 °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.

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### 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. Avoid contact with eyes,
skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

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

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: 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 respirator with multi-purpose
combination (US) or type ABEK (EN 14387) respirator cartridges as
a backup to engineering controls. If the respirator is the sole
means of protection, use a full-face supplied air respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS

<table>
<thead>
<tr>
<th>Country</th>
<th>Source</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>ACGIH</td>
<td>TWA</td>
<td>0.1 MG(SN)/M3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>0.2 MG/M3</td>
</tr>
</tbody>
</table>

Remarks: Skin

USA MSHA Standard-air TWA 0.1 MG(SN)/M3
USA OSHA. PEL 8H TWA 0.1 MG(SN)/M3
New Zealand OEL
Remarks: check ACGIH TLV

USA NIOSH TWA 0.1 MG(SN)/M3

Section 9 - Physical/Chemical Properties

Appearance
Physical State: Clear viscous liquid
Color: Light yellow

Property
Value
At Temperature or Pressure
Molecular Weight 631.56 AMU
pH N/A
BP/BP Range N/A
MP/MP Range N/A
Freezing Point N/A
Vapor Pressure 0.2 mmHg 160 °C
Vapor Density N/A
Saturated Vapor Conc. N/A
SG/Density 1.066 g/cm3
Bulk Density N/A
Odor Threshold N/A
Volatile% N/A
VOC Content N/A
Section 10 - Stability and Reactivity

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

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: May be harmful if absorbed through the skin.
Eye Contact: Causes eye irritation.
Inhalation: May be fatal if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: Harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Oral
Rat
175 mg/kg
LD50

Intravenous
Rat
33 MG/KG
LD50
Remarks: Blood: Changes in bone marrow not included above.
Kidney, Ureter, Bladder: Changes in tubules (including acute renal failure, acute tubular necrosis). Liver: Fatty liver
degeneration.

Oral
Mouse
210 mg/kg
LD50

Inhalation
Mouse
150 mg/m3
LC50

Intraperitoneal
Mouse
180 MG/KG
LD50

Oral
Rabbit
100 mg/kg
LD50

Inhalation
Mammal
2,400 mg/m3
LC50

IRRITATION DATA
Skin
Rabbit
500 mg
24 H
Remarks: Moderate irritation effect
Skin
Remarks: Moderate irritation effect
Skin
Rabbit
500 mg
Remarks: Severe irritation effect

Eyes
Rabbit
100 mg
24H
Remarks: Moderate irritation effect

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

CHRONIC EXPOSURE - TERATOGEN

Species: Rat  
Dose: 50532 UG/KG  
Route of Application: Oral  
Exposure Time: (8D PREG)  
Result: Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

Section 12 - Ecological Information

ACUTE ECOTOXICITY TESTS

Test Type: EC50 Daphnia  
Species: Daphnia magna  
Time: 24 h  
Value: 0.66 mg/l

Test Type: LC50 Fish  
Species: Leuciscus idus  
Time: 48 h  
Value: 2 mg/l

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: Corrosive liquids, toxic, n.o.s.  
UN#: 2922  
Class: 8  
Packing Group: Packing Group III  
Hazard Label: Corrosive  
Hazard Label: Toxic substances.  
PIH: Not PIH

IATA

Proper Shipping Name: Corrosive liquid, toxic, n.o.s.  
IATA UN Number: 2922  
Hazard Class: 8  
Packing Group: III

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: T+-N  
Indication of Danger: Very toxic. Dangerous for the environment.
Risk Statements: Harmful if swallowed. Very toxic by inhalation. Irritating to eyes and skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap-suds. Wear suitable protective clothing and gloves. 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: Highly Toxic (USA) Very Toxic (EU).
Risk Statements: Harmful if swallowed. Very toxic by inhalation. Irritating to eyes and skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Wear suitable protective clothing and gloves. 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.

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: Yes
NDSL: No

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.
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