

## MATERIAL SAFETY DATA SHEET

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Version 1.6

## Section 1 - Product and Company Information

Product Name DIBUTYLTIN DILAURATE, 95%  
Product Number 291234  
Brand ALDRICH

Company Sigma-Aldrich  
Address 3050 Spruce Street  
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832  
Fax: 800-325-5052  
Emergency Phone: 314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313 No
DIBUTYLTIN DILAURATE	77-58-7	No

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-butylcinicity (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

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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

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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

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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.

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## Section 7 - Handling and Storage

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### HANDLING

User Exposure: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

### STORAGE

Suitable: Keep tightly closed.

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## Section 8 - Exposure Controls / PPE

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### 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

Country	Source	Type	Value
USA	ACGIH	TWA	0.1 MG(SN)/M3
		STEL	0.2 MG/M3
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

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## Section 9 - Physical/Chemical Properties

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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	

Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	Log Kow: > 3	
Decomposition Temp.	N/A	
Flash Point	235 °F 113 °C	Method: closed cup
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	1.471	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

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## Section 10 - Stability and Reactivity

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### 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

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## Section 11 - Toxicological Information

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### 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)

G.I. System. Liver. Nerves.

### 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

Remarks: Lungs, Thorax, or Respiration:Respiratory depression.  
Gastrointestinal:Changes in structure or function of salivary glands. Behavioral:Tremor.

Inhalation

Mouse

150 mg/m<sup>3</sup>

LC50

Remarks: Kidney, Ureter, Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis).  
Behavioral:Somnolence (general depressed activity).  
Blood:Changes in bone marrow not included above.

Intraperitoneal

Mouse

180 MG/KG

LD50

Remarks: Lungs, Thorax, or Respiration:Respiratory depression.  
Behavioral:Muscle weakness. Gastrointestinal:Changes in structure or function of salivary glands.

Oral

Rabbit

100 mg/kg

LD50

Remarks: Behavioral:Somnolence (general depressed activity).  
Liver:Fatty liver degeneration. Blood:Pigmented or nucleated red blood cells.

Inhalation

Mammal

2,400 mg/m<sup>3</sup>

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).

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#### Section 12 - Ecological Information

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#### 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

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#### Section 13 - Disposal Considerations

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#### 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.

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#### Section 14 - Transport Information

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#### 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

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#### Section 15 - Regulatory Information

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#### EU ADDITIONAL CLASSIFICATION

Symbol of Danger: T+-N  
Indication of Danger: Very toxic. Dangerous for the environment.

R: 22-26-36/38-50/53

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.

S: 26-28-36/37-45-60-61

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.

US Statements: Target organ(s): G.I. System. 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: Yes

NDSL: No

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#### Section 16 - Other Information

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#### 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 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.