

# SAFETY DATA SHEET

Date Printed: 06/03/2024

Date Revised: 01/15/2022

## SECTION 1. IDENTIFICATION

**Product Identifier:** Dibutyltin Dichloride

**Product Code:** DBSN-CL-01-CC

**CAS Number:** 683-18-1

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 2), H330

Acute toxicity, Dermal (Category 4), H312

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Reproductive toxicity (Category 1B), H360

Specific target organ toxicity - single exposure, Oral (Category 1), thymus, H370

Specific target organ toxicity - repeated exposure, Oral (Category 1), thymus, H372

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410



Signal Word Danger

Hazard statement(s)

H301 Toxic if swallowed.

H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H341 Suspected of causing genetic defects.  
H360 May damage fertility or the unborn child.  
H370 Causes damage to organs (thymus) if swallowed.  
H372 Causes damage to organs (thymus) through prolonged or repeated exposure if swallowed.  
H410 Very toxic to aquatic life with long lasting effects.  
Precautionary statement(s)  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P284 Wear respiratory protection.  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.  
P305 + P351 + P338 +  
P310  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.  
P391 Collect spillage.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.  
Hazards not otherwise classified (HNOC) or not covered by GHS - none

---

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances

Synonyms : Dibutyldichlorotin

Formula : C<sub>8</sub>H<sub>18</sub>Cl<sub>2</sub>Sn

Molecular weight : 303.84 g/mol

CAS-No. : 683-18-1

EC-No. : 211-670-0

## SECTION 4. FIRST AID MEASURES

Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately.

In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

---

## SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Carbon oxides

Hydrogen chloride gas

Tin/tin oxides

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

---

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area.

Avoid generation of dusts.

Reference to other sections

For disposal see section 13.

---

## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Moisture sensitive.

Storage class

Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

---

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact

with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Body Protection

protective clothing

#### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains.

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Form: Solidified mass or fragments

Color: colorless

Odor stinging

Odor Threshold No data available

pH No data available

Melting point/freezing point

Melting point/range: 37 - 40 °C (99 - 104 °F) - lit.

Initial boiling point and boiling range

135 °C 275 °F at 13 hPa - lit.

Flash point 113 °C (235 °F) - closed cup

Evaporation rate No data available

Flammability (solid, gas) No data available

Upper/lower flammability or explosive limits No data available

Vapor pressure 0.0016 hPa at 25 °C (77 °F) - OECD Test Guideline 104

Vapor density No data available

Density 1.4 g/cm<sup>3</sup> at 20 °C (68 °F) - OECD Test Guideline 109

Relative density No data available

Water solubility 0.32 g/l at 20 °C (68 °F) soluble

Partition coefficient: n-octanol/water

log Pow: 1.56 - (experimental) - Bioaccumulation is not expected., (Lit.)

Autoignition temperature No data available

Decomposition temperature > 230 °C (> 446 °F) -

Viscosity No data available

Explosive properties No data available

Oxidizing properties none

---

## SECTION 10. STABILITY AND REACTIVITY

#### Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

#### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions  
Violent reactions possible with:  
Oxidizing agents  
Conditions to avoid  
Heat.  
Strong heating.  
Incompatible materials  
No data available  
Hazardous decomposition products  
In the event of fire: see section 5

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects  
Acute toxicity  
LD50 Oral - Rat - male and female - 219 mg/kg  
Remarks: (ECHA)  
LC50 Inhalation - Rat - male and female - 4 h - 0.059 mg/l - dust/mist  
Remarks: (ECHA)  
Inhalation: Corrosive to respiratory system.  
Dermal: No data available  
No data available  
Skin corrosion/irritation  
Skin - Rabbit  
Result: Corrosive - 4 h  
(Draize Test)  
Remarks: (ECHA)  
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)  
Serious eye damage/eye irritation  
Eyes - Rabbit  
Result: Causes serious eye damage.  
(Draize Test)  
Remarks: (ECHA)  
Causes serious eye damage.  
Respiratory or skin sensitization  
Maximization Test - Guinea pig  
Result: positive  
(OECD Test Guideline 406)  
Remarks: (in analogy to similar products)  
Germ cell mutagenicity  
Suspected of causing genetic defects.  
Test Type: Mutagenicity (mammal cell test): chromosome aberration.  
Test system: Human lymphocytes  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: positive  
Test Type: Ames test  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
Test Type: In vitro mammalian cell gene mutation test  
Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative  
Test Type: Micronucleus test  
Species: Mouse  
Cell type: Red blood cells (erythrocytes)  
Application Route: Oral  
Method: OECD Test Guideline 474  
Result: positive  
Carcinogenicity  
IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.  
Reproductive toxicity  
May damage the unborn child.  
May damage fertility.  
Specific target organ toxicity - single exposure  
Oral - Causes damage to organs. - thymus  
Specific target organ toxicity - repeated exposure  
Oral - Causes damage to organs through prolonged or repeated exposure. - thymus  
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)  
Aspiration hazard  
No data available  
Additional Information  
Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 0.3 - 0.4 mg/kg  
RTECS: WH7100000  
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.  
After absorption:  
Damage to:  
Liver  
The following applies to organic tin compounds in general: systemic effect: CNS disorders (spasms, narcosis, respiratory paralysis).  
Other dangerous properties can not be excluded.  
This substance should be handled with particular care.

---

## SECTION 12. ECOLOGICAL INFORMATION

Toxicity  
Toxicity to fish semi-static test LC50 - Danio rerio (zebra fish) - > 4 mg/l - 96 h  
(OECD Test Guideline 203)  
Toxicity to daphnia  
and other aquatic  
invertebrates  
static test EC50 - Daphnia magna (Water flea) - 0.843 mg/l - 48 h  
(OECD Test Guideline 202)  
Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - 8 mg/l

- 72 h  
(OECD Test Guideline 201)  
Persistence and degradability  
Biodegradability aerobic - Exposure time 28 d  
Result: ca.6 % - Not readily biodegradable.  
(OECD Test Guideline 301B)  
Bioaccumulative potential  
Bioaccumulation *Poecilia reticulata* (guppy) - 4 Weeks  
- 394 µg/l(Dibutyltin chloride)  
Bioconcentration factor (BCF): 15  
Mobility in soil  
No data available  
Results of PBT and vPvB assessment  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted  
Endocrine disrupting properties  
No data available  
Other adverse effects  
Discharge into the environment must be avoided.

---

## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Product  
Waste material must be disposed of in accordance with the national and local regulations.  
Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

---

## **SECTION 14. TRANSPORT INFORMATION**

DOT (US)  
UN number: 3146 Class: 6.1 Packing group: II  
Proper shipping name: Organotin compounds, solid, n.o.s.  
Reportable Quantity (RQ):  
1) Marine pollutant: yes  
Poison Inhalation Hazard: No  
IMDG  
UN number: 3146 Class: 6.1 Packing group: II EMS-No: F-A, S-A  
Proper shipping name: ORGANOTIN COMPOUND, SOLID, N.O.S. (Dibutyltin chloride)  
Marine pollutant : yes  
Marine pollutant : yes  
IATA  
UN number: 3146 Class: 6.1 Packing group: II  
Proper shipping name: Organotin compound, solid, n.o.s. (Dibutyltin chloride)

---

## **SECTION 15. REGULATORY INFORMATION**

SARA 302 Components  
This material does not contain any components with a section 302 EHS TPQ.  
SARA 313 Components



This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

---

## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements 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 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.