

Material Safety Data Sheet

Dibutyltin dichloride, 97%

ACC# 27815

Section 1 - Chemical Product and Company Identification

MSDS Name: Dibutyltin dichloride, 97%

Catalog Numbers: AC194870000, AC194870010, AC194872500

Synonyms: Dibutyldichlorotin; Dibutyldichlorostannane; Di-n-butyltin dichloride.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

| CAS# | Chemical Name | Percent | EINECS/ELINCS |
|----------|-----------------------|---------|---------------|
| 683-18-1 | Dibutyltin dichloride | 97 | 211-670-0 |

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white to beige powder.

Danger! Causes severe eye irritation and possible eye injury. Harmful if swallowed, inhaled, or absorbed through the skin. Causes skin and respiratory tract irritation. Possible risk of harm to the unborn child. Severe marine pollutant. Moisture sensitive.

Target Organs: Central nervous system, respiratory system, eyes, immune system, reproductive system, skin.

Potential Health Effects

Eye: Causes severe eye irritation and possible injury. One instance of eye injury is reported in a worker who accidentally splashed the liquid in his face and eyes. Despite immediate washing with water, lacrimation and conjunctival hyperemia appeared within minutes and persisted for four days. At the end of a week the skin was still erythematous, but the eyes appeared normal. (Witco)

Skin: Causes severe skin irritation. May be absorbed through the skin in harmful amounts.

Ingestion: Harmful if swallowed. May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns.

Inhalation: Harmful if inhaled. Causes respiratory tract irritation.

Chronic: This substance has caused adverse reproductive and fetal effects in laboratory animals. Exposure limits have been recommended for organotin compounds to minimize the potential for adverse effects on immune function and the CNS.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid. Wash clothing before reuse.

Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam. Solid streams of water or high volume water jet may spread fire.

Flash Point: > 112 deg C (> 233.60 deg F)

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not breathe dust, vapor, mist, or gas. Keep container tightly closed. Use only with adequate ventilation. Do not get in eyes. Avoid contact with skin and clothing.

Storage: Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture. Store protected from heat and direct sunlight.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs |
|-----------------------|---|---|---|
| Dibutyltin dichloride | 0.1 mg/m ³ TWA (as Sn) (listed under Tin organic compounds).0.2 mg/m ³ STEL (as Sn) (listed under Tin organic compounds).Skin - potential significant contribution to overall exposure by the cutaneous route (listed under Tin organic compounds). | 0.1 mg/m ³ TWA (as Sn, except Cyhexatin) (listed under Tin organic compounds).25 mg/m ³ IDLH (as Sn except Cyhexatin) (listed under Tin organic compounds). | 0.1 mg/m ³ TWA (as Sn) (listed under Tin organic compounds). |

OSHA Vacated PELs: Dibutyltin dichloride: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Powder

Appearance: white to beige

Odor: characteristic odor

pH: Not available.

Vapor Pressure: .0012 mm Hg @ 25 deg C

Vapor Density: 10.5 (air=1)

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: 135 deg C @ 10 mmHg

Freezing/Melting Point:39-41 deg C

Decomposition Temperature:> 230 deg C

Solubility: insoluble

Specific Gravity/Density:1.37-1.40 g/cm³ @ 20

Molecular Formula:C₈H₁₈Cl₂Sn

Molecular Weight:303.83

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Moisture sensitive.

Conditions to Avoid: Dust generation, moisture, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents, strong acids, strong bases.

Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, carbon dioxide, tin/tin oxides.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 683-18-1: WH7100000

LD50/LC50:

CAS# 683-18-1:

Draize test, rabbit, eye: 50 ug/24H Severe;

Draize test, rabbit, skin: 2 mg/24H Severe;

Inhalation, rat: LC50 = >364 mg/m³/4H;

Oral, mouse: LD50 = 70 mg/kg;

Oral, rabbit: LD50 = 50 ug/kg;

Oral, rat: LD50 = 50 mg/kg;

Carcinogenicity:

CAS# 683-18-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: Pregnant Wistar-rats were dosed once daily by gastric intubation with dibutyltin dichloride at doses of 10 or 15 mg/kg on day 7 and 8 of pregnancy. A significantly and markedly increased incidence of fetuses with malformations such as exencephaly, cleft jaw, cleft lip, ankyloglosia, club foot, deformity of the vertebral column in the cervical and thoracic regions, and of the ribs and anophthalmia or microphthalmia was observed in both groups treated.

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Sheepshead minnow: >4.8 mg/l; 96 h; LC50Daphnia: Daphnia: 1.4 mg/l; 48 h; EC50 No data available.

Environmental: Terrestrial: May adsorb to soil and biodegrade. Significant adsorption to soil may limit leaching. Aquatic: If dibutyltin dichloride is released to water, it will behave like a simple protic acid due to the resulting formation of hydronium ion and either dibutyltin dihydroxide or other dibutyltin-hydroxide species. Atmospheric: May be present in both the vapor and particulate phases. The compound may be susceptible to direct photolysis and may be susceptible to the gas-phase reaction with photochemically produced hydroxyl radicals.

Physical: Not readily biodegradable: 0% after 20 d

Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

| | US DOT | Canada TDG |
|-----------------------|--|--|
| Shipping Name: | TOXIC SOLIDS, CORROSIVE, ORGANIC, N.O.S. | Organotin Compounds, Solid, N.O.S. (DIBUTYLtin DICHLORIDE) |
| Hazard Class: | 6.1 | 6.1(8) |
| UN Number: | UN2928 | UN3146 |
| Packing Group: | II | II |

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 683-18-1 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 683-18-1 can be found on the following state right to know lists: Minnesota, (listed as Tin organic compounds), Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T N

Risk Phrases:

R 23/25 Toxic by inhalation and if swallowed.
R 37/38 Irritating to respiratory system and skin.
R 41 Risk of serious damage to eyes.
R 48/21/22 Harmful : danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
R 63 Possible risk of harm to the unborn child.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 22 Do not breathe dust.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 28A After contact with skin, wash immediately with plenty of water.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 683-18-1: 2

Canada - DSL/NDSL

CAS# 683-18-1 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D1B, D2A, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 683-18-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997

Revision #6 Date: 4/28/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.