

SAFETY DATA SHEET

1. PRODUCT

1.1 Product identifiers

Name: Butyltin trichloride

CAS-No.: 1118-46-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Flammable liquids (Category 4), H227

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332


Acute toxicity, Dermal (Category 4), H312

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

| | |
|----------------------------|--|
| Pictogram |  |
| Signal word | Danger |
| Hazard statement(s) | H227 Combustible liquid. H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. |
| Precautionary statement(s) | P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ 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. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. 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. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant. |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| | |
|-------------------|--|
| Synonyms: | Butyltrichlorotin |
| Formula: | C ₄ H ₉ Cl ₃ Sn |
| Molecular weight: | 282.18 g/mol |
| CAS-No.: | 1118-46-3 |
| EC-No.: | 214-263-6 |

Hazardous components

| Component | Classification | Concentration |
|----------------------|---|---------------|
| Butyltin trichloride | | |
| | Flam. Liq. 4; Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; H227, H302 + H312 + H332, H314 | <= 100 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

| |
|--|
| General advice |
| Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. |
| If inhaled |
| If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| In case of skin contact |
| Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician. |
| In case of eye contact |
| Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital. |
| If swallowed |
| Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. |

4.2 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

4.2 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Moisture sensitive.

Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

7.3 Specific end use(s)

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

| Component | CAS-No. | Value | Control parameters | Basis |
|----------------------|-----------|--|--------------------|---|
| Butyltin trichloride | 1118-46-3 | TWA | 0.100000 mg/m3 | USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants |
| | | TWA | 0.100000 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |
| | Remarks | Central nervous system Immune effects Upper Respiratory Tract irritation Headache Eye irritation Nausea Not classifiable as a human carcinogen Danger of cutaneous absorption varies | | |
| | | STEL | 0.200000 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |
| | | Central nervous system Immune effects Upper Respiratory Tract irritation Headache Eye irritation Nausea Not classifiable as a human carcinogen Danger of cutaneous absorption varies | | |
| | | TWA | 0.100000 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | Also see specific listing for Cyhexatin. Potential for dermal absorption | | |
| | | TWA | 0.1 mg/m3 | USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants |
| | | TWA | 0.1 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |

| Component | CAS-No. | Value | Control parameters | Basis |
|-----------|---------|--|--------------------|---|
| | | Central nervous system Immune effects Upper Respiratory Tract irritation Headache Eye irritation Nausea Not classifiable as a human carcinogen Danger of cutaneous absorption varies | | |
| | | STEL | 0.2 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |
| | | Central nervous system Immune effects Upper Respiratory Tract irritation Headache Eye irritation Nausea Not classifiable as a human carcinogen Danger of cutaneous absorption varies | | |
| | | TWA | 0.1 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | Also see specific listing for Cyhexatin. Potential for dermal absorption | | |
| | | PEL | 0.1 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| | | Skin | | |
| | | STEL | 0.2 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| | | Skin | | |

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

| | |
|-----------------------------------|---|
| Eye/face protection | Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). |
| 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. Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: > 480 min Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 130 min Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. |
| Body Protection | Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| Respiratory protection | 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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| Control of environmental exposure | Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. |

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | |
|---|---|
| Appearance | Form: liquid |
| Odour | No data available |
| Odour Threshold | No data available |
| pH | No data available |
| Melting point/freezing point | Melting point/freezing point: -62.99 °C (-81.38 °F) |
| Initial boiling point and boiling range | 93 °C (199 °F) at 13 hPa (10 mmHg) - lit. |
| Flash point | No data available |
| Evaporation rate | No data available |

| | |
|--|---|
| Flammability (solid, gas) | No data available |
| Upper/lower flammability or explosive limits | No data available |
| Vapour pressure | 0.111 hPa (0.083 mmHg) at 20 °C (68 °F) - OECD Test Guideline 104 |
| Vapour density | No data available |
| Relative density | 1.693 g/cm ³ at 25 °C (77 °F) - lit. |
| Water solubility | No data available |
| Partition coefficient: n-octanol/water | No data available |
| Auto-ignition temperature | No data available |
| Decomposition temperature | No data available |
| Viscosity | No data available |
| Explosive properties | No data available |
| Oxidizing properties | No data available |

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents, Strong bases, Alcohols

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Tin/tin oxides

Other decomposition products - No data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - > 2,000 mg/kg
Inhalation: No data available
Dermal: No data available
No data available

Skin corrosion/irritation

Skin - Rabbit
Result: Causes burns. - 4 h

Serious eye damage/eye irritation

Eyes - Rabbit
Result: Risk of serious damage to eyes. - 24 h

Respiratory or skin sensitisation

No data available

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|--|
| Germ cell mutagenicity |
| Ames test S. typhimurium Result: negative Mutagenicity (micronucleus test) Mouse - male and female Result: negative |
| Carcinogenicity |
| IARC: No component 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 component 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 identified as a carcinogen or potential carcinogen by OSHA. |
| Reproductive toxicity |
| No data available No data available |
| Specific target organ toxicity -single exposure |
| No data available |
| Specific target organ toxicity -repeated exposure |
| No data available |
| Aspiration hazard |
| No data available |
| Additional Information |
| Repeated dose toxicity Rat - male and female - Oral - NOAEL : 1,500 mg/kg - LOAEL : 7,500 mg/kg RTECS: WH6780000 Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea |

12. ECOLOGICAL INFORMATION

12.1 Toxicity

| | |
|---|--|
| Toxicity to fish | semi-static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203) |
| Toxicity to daphnia and other aquatic invertebrates | Immobilization EC50 - Daphnia magna (Water flea) - 83 mg/l - 48 h (OECD Test Guideline 202) |
| Toxicity to algae | Growth inhibition EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - 0.31 mg/l - 72 h (OECD Test Guideline 201) |
| Toxicity to bacteria | IC50 - Sludge Treatment - 134.5 mg/l |

12.2 Persistence and degradability

| | |
|------------------|--|
| Biodegradability | aerobic - Exposure time 35 d Result: - Not readily biodegradable. (OECD Test Guideline 301F) |
|------------------|--|

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

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|--|
| Product |
| Offer surplus and non-recyclable solutions to a licensed disposal company. 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. |
| Contaminated packaging |
| Dispose of as unused product. |

14. TRANSPORT INFORMATION

DOT (US)

UN number: 3265 Class: 8 Packing group: II

Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Butyltin trichloride)

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

IMDG

UN number: 3265 Class: 8 Packing group: II EMS-No: F-A, S-B

Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Butyltin trichloride)

IATA

UN number: 3265 Class: 8 Packing group: II

Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Butyltin trichloride)

15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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

Massachusetts Right To Know Components

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

Pennsylvania Right To Know Components

| Component | CAS-No. | Revision Date |
|----------------------|-----------|---------------|
| Butyltin trichloride | 1118-46-3 | 1993-02-16 |

New Jersey Right To Know Components

| Component | CAS-No. | Revision Date |
|----------------------|-----------|---------------|
| Butyltin trichloride | 1118-46-3 | 1993-02-16 |

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Acute toxicity

Eye Dam. Serious eye damage

Flam. Liq. Flammable liquids

H227 Combustible liquid.

H302 Harmful if swallowed.

H302 + H312 +H332 Harmful if swallowed, in contact with skin or if inhaled

H312 Harmful in contact with skin.

HMIS Rating

Health hazard: 3

Chronic Health Hazard:

Flammability: 0

Physical Hazard 0

NFPA Rating

Health hazard: 3

Fire Hazard: 0

Reactivity Hazard: 0
