

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (2N) 99% Tetraabutyltin

**Product Code:** 4BUT-SN-02

**CAS Number:** 1461-25-2

**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

2.1 Classification of the substance or mixture

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

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Dermal (Category 4), H312

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

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

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

2.2 GHS Label elements, including precautionary statements



Pictogram

Signal word Danger

Hazard statement(s)

H301 Toxic if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.  
Precautionary statement(s)  
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.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ eye protection/ face protection.  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P314 Get medical advice/ attention if you feel unwell.  
P322 Specific measures (see supplemental first aid instructions on this label).  
P330 Rinse mouth.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P391 Collect spillage.  
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 - none

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

### **3.1 Substances**

Synonyms : Tin tetrabutyl

Formula : C<sub>16</sub>H<sub>36</sub>Sn

Molecular weight : 347.17 g/mol

CAS-No. : 1461-25-2

EC-No. : 215-960-8

Index-No. : 050-008-00-3

Hazardous components

Component Classification Concentration

Tetrabutyltin

Acute Tox. 3; Acute Tox. 4;

Skin Irrit. 2; Eye Irrit. 2A;

STOT RE 1; Aquatic Acute 1;

Aquatic Chronic 1; H301,

H312, H315, H319, H372,

H410

<= 100 %

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## **SECTION 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

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

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

4.3 Indication of any immediate medical attention and special treatment needed

No data available

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## **SECTION 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

Nature of decomposition products not known.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

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

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing Vapors, 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.

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

7.1 Precautions for safe handling

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

Normal measures for preventive fire protection.

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.

7.3 Specific end use(s)

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

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

8.1 Control parameters

Components with workplace control parameters

Component CAS-No. Value Control

parameters

Basis

Tetrabutyltin 1461-25-2 TWA 0.100000

mg/m<sup>3</sup>

USA. Occupational Exposure Limits

(OSHA) - Table Z-1 Limits for Air

Contaminants

TWA 0.100000

mg/m<sup>3</sup>

USA. ACGIH Threshold Limit Values

(TLV)

Remarks Not classifiable as a human carcinogen

Danger of cutaneous absorption

varies

STEL 0.200000

mg/m<sup>3</sup>

USA. ACGIH Threshold Limit Values

(TLV)

Not classifiable as a human carcinogen

Danger of cutaneous absorption

varies

TWA 0.100000

mg/m<sup>3</sup>

USA. NIOSH Recommended

Exposure Limits

Also see specific listing for Cyhexatin.

Potential for dermal absorption

TWA 0.1 mg/m<sup>3</sup> USA. Occupational Exposure Limits

(OSHA) - Table Z-1 Limits for Air

Contaminants

TWA 0.1 mg/m<sup>3</sup> 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

STEL 0.2 mg/m<sup>3</sup> 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/m<sup>3</sup> USA. NIOSH Recommended

Exposure Limits

Also see specific listing for Cyhexatin.

Potential for dermal absorption

## 8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses 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.

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 multipurpose

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.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance Form: clear, liquid

Colour: colourless

b) Odor No data available

c) Odor Threshold No data available  
d) pH No data available  
e) Melting point/freezing point  
Melting point/range: -97 °C (-143 °F)  
f) Initial boiling point and boiling range  
245 - 247 °C (473 - 477 °F) at 1,013 hPa (760 mmHg)  
127 - 145 °C (261 - 293 °F) at 13 hPa (10 mmHg)  
g) Flash point 107 °C (225 °F) - closed cup  
h) Evaporation rate No data available  
i) Flammability (solid, gas) No data available  
j) Upper/lower flammability or explosive limits  
No data available  
k) Vapor pressure No data available  
l) Vapor density No data available  
m) Relative density 1.054 g/cm<sup>3</sup>  
n) Water solubility No data available  
o) Partition coefficient: noctanol/water  
No data available  
p) Auto-ignition temperature  
No data available  
q) Decomposition temperature  
No data available  
r) Viscosity No data available  
s) Explosive properties No data available  
t) Oxidizing properties No data available  
9.2 Other safety information  
No data available

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## **SECTION 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  
10.6 Hazardous decomposition products  
Other decomposition products - No data available  
In the event of fire: see section 5

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## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 1,268 mg/kg

Remarks: Behavioral: Somnolence (general depressed activity). Diarrhoea Nutritional and Gross

Metabolic: Weight loss

or decreased weight gain.

Inhalation: No data available

LD50 Intravenous - Mouse - 56 mg/kg

Skin corrosion/irritation

Serious eye damage/eye irritation

Eyes - Rabbit

Respiratory or skin sensitisation

Germ cell mutagenicity

No data available

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

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

Additional Information

RTECS: Not available

General signs of toxicity for overexposure to tetraalkyl tin compounds include muscular weakness and paralysis,

leading to respiratory failure, tremors, convulsive movements, closure of the eyelids, and photophobia.

Histologically,

tetraalkyl tin compounds show a decrease in cytoplasmic basophilia of the liver, chromatolysis of the Purkinje cells of

the cerebellum, and increase in the water content of the brain and spinal cord., 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

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## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 0.045 mg/l - 96.0 h

Toxicity to daphnia and

other aquatic

invertebrates

EC50 - Daphnia magna (Water flea) - 0.002 mg/l - 24 h

Toxicity to algae Growth inhibition EC50 - Skeletonema costatum - 0.017 mg/l - 72 h

12.2 Persistence and degradability

Biodegradability Biotic/Aerobic - Exposure time 28 d

Result: < 10 % - Not readily biodegradable.

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.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods

Product

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.

Offer surplus and

non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT (US)

UN number: 1760 Class: 8 Packing group: II

Proper shipping name: Corrosive liquids, n.o.s. (Tetrabutyltin)

Poison Inhalation Hazard: No

IMDG

UN number: 1760 Class: 8 Packing group: II EMS-No: F-A, S-B

Proper shipping name: CORROSIVE LIQUID, N.O.S. (Tetrabutyltin)

IATA

UN number: 1760 Class: 8 Packing group: II

Proper shipping name: Corrosive liquid, n.o.s. (Tetrabutyltin)

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## **SECTION 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  
Tetrabutyltin  
CAS-No.  
1461-25-2  
Revision Date  
1993-04-24  
Pennsylvania Right To Know Components  
Tetrabutyltin  
CAS-No.  
1461-25-2  
Revision Date  
1993-04-24  
New Jersey Right To Know Components  
Tetrabutyltin  
CAS-No.  
1461-25-2  
Revision Date  
1993-04-24  
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.

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## 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.