According to OHSA 29 CFR 1910.1200



SEC	TION 1: Identification	of the substance/mixture and of the company/undertaking
1.1	Product identifier CAS number: Product name:	116237-97-9 Tetrabutylphosphonium p-toluenesulfonate
	Catalog number: Brand:	HFC831 Hoffman Fine Chemicals
1.2	Relevant identified u	ses of the substance or mixture and uses advised against For laboratory research purposes. Not for drug, household nor animal use.
1.3	Details of the supplier of the safety data sheet	
	Company: Address: Telephone: Fax:	Hoffman Fine Chemicals Pty Ltd 4 46-50 Buchanan Road, Brooklyn, Victoria, 3012, Australia 03 9315 3435
1.4	Emergency telephone number	
	Emergency telephone number:	800-424-9300 CHEMTREC USA 1-703-527-3887 CHEMTREC International 24 Hours/day; 7 Days/week
SEC	TION 2: Hazards ider	tification Hofman Fines
2.1	Classification of the	substance or mixture

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

Skin corrosion/irritation Category 2 H315

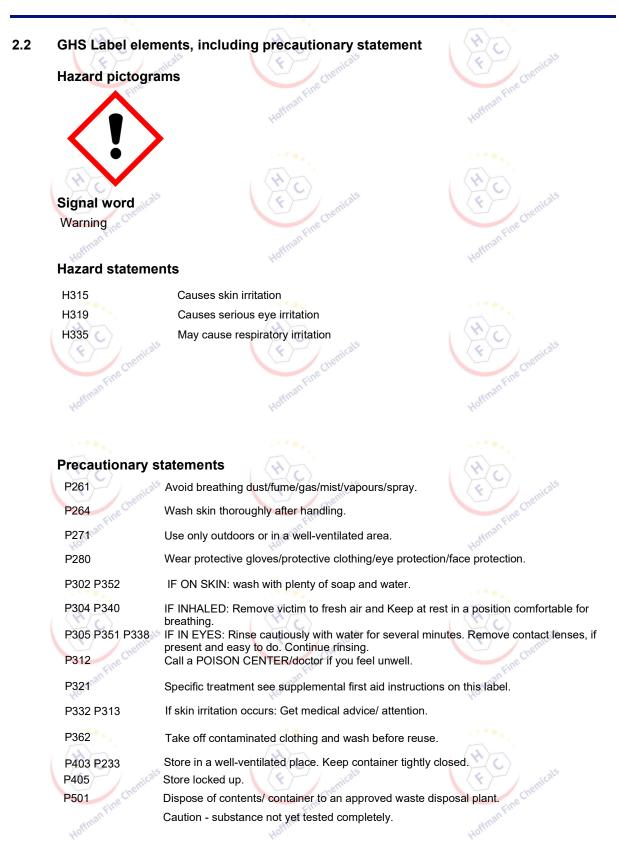
Serious eye damage/eye irritationCategory 2A H319

Specific target organ toxicity, single exposure; Respiratory tract irritationCategory 3, H335

For the Full text of H-Statement mentioned in this Section: see SECTION 16.

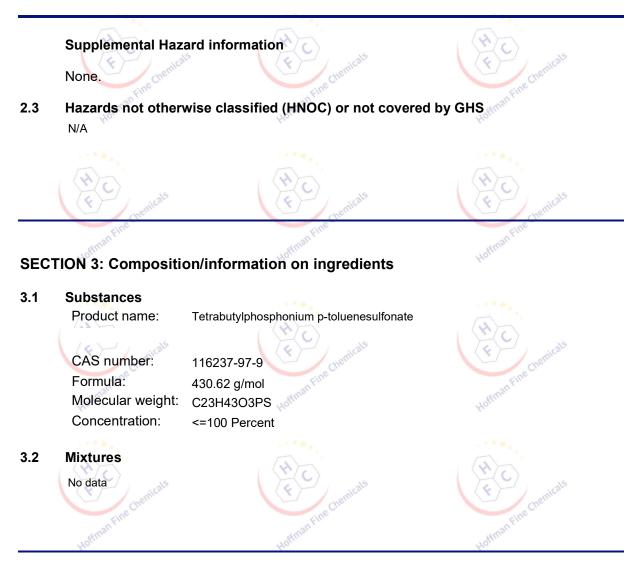
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According to OHSA 29 CFR 1910.1200





SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Consult a physician. Show this material 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.

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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

Provided the patient is conscious, wash out mouth with water. Vomiting should only be induced under the direction of a physician or a poison control centre.

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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

No data

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5.2 Special hazards arising from the substance or mixture Carbon oxides, Sulphur oxides, Oxides of phosphorus

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5.3 Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary. Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes. 5.4 Further information No data available.

SECTION 6: Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas.

(F) micals (F) micals (F)

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Do not attempt to take action without suitable protective clothing.

6.2 Environmental protections

Prevent further leakage or spillage if safe to do so. Do not let product enter drains or river. Alert the neighbourhood to the presence of fumes or gas.

6.3 Methods and material for containment and cleaning up

Mix with sand or vermiculite, transfer to suitable container and arrange disposal by approved disposal specialists.

6.4 Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- a) Handle in accordance with good industrial hygiene and safety practice
- b) Take measures to prevent the build-up of electrostatic charge.

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- c) Provide appropriate exhaust ventilation at places where dust is formed.
- d) Avoid inhalation of vapor or mist.
- e) Not to eat, drink, smoke in work areas.
- f) To wash hands after use.
- g) To remove contaminated clothing and protective equipment before entering eating areas.

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 area

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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

hygroscopic Store under inert gas.

7.3 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

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

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.

- a) Handle in accordance with good industrial hygiene and safety practice.
- b) Wash hands before breaks and at the end of workday.
- c) Suitable eye/body wash equipment should be available in the vicinity of any potential exposure.
- d) Ensure adequate ventilation, especially in confined areas.

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e) Use explosion-proof electrical appliances, ventilation, lighting and other equipment.
 f) Set up emergency evacuation routes and necessary evacuation zones.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Face shield (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.

Body Protection

Complete suit protecting against chemicals, Flame retardant protective clothing. 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 fullface 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

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Odor: Odor threshold: pH:

- Form: crystalline Colour: colourless
- No data available
- No data availabi
- No data available 54 - 59 C

Melting point/freezing point:

Initial boiling point/boiling range: No data available

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Flash point: Evaporation rate: Flammability (solid, gas): Upper explosive limits: Lower explosive limits: Vapor pressure: Vapor density: Relative density: Water solubility: Partition coefficient: noctanol/water Auto-ignition temperature: Decomposition temperature: Viscosity: Explosive properties: Oxidizing properties:

No data available No data available

9.2 Other information No data available.

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
- 10.4 Conditions to avoid No data available

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10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides, Oxides of phosphorus

Other decomposition products - No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

No data available Acute toxicity: No data available Skin corrosion/irritation: No data available Serious eye damage/eye irritation: No data available Respiratory or skin sensitization: No data available Germ cell mutagenicity: No data available Carcinogenicity: Reproductive toxicity: No data available Specific Target Organ Toxicity Inhalation - May cause respiratory irritation. (Single Exposure): Specific Target Organ Toxicity No data available (Repeated Exposure): No data available Aspiration hazard: Chronic Symptoms: No data available

11.2 Additional information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available



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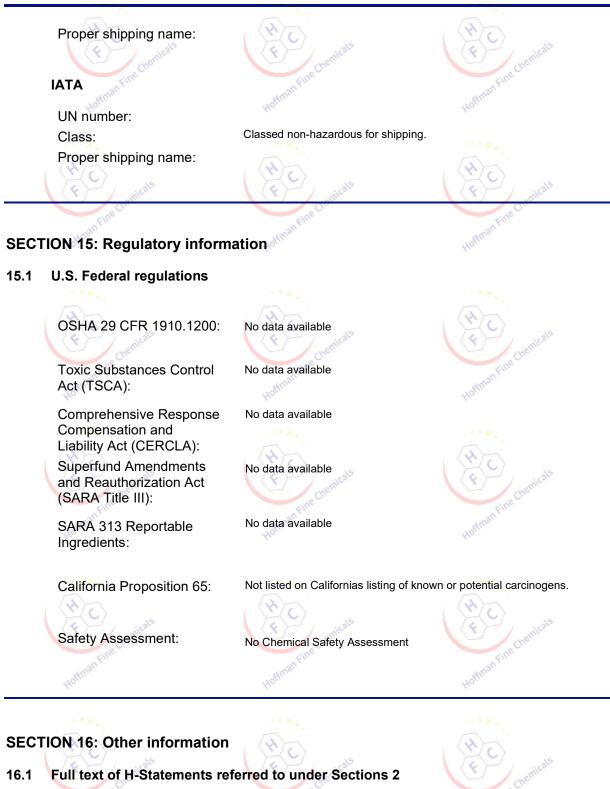


UN number: Class: EMS-No:

Classed non-hazardous for shipping.

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H315

Causes skin irritation

According to OHSA 29 CFR 1910.1200



H319 Causes serious eye irritation
 H335 May cause respiratory irritation
 If a cause respiratory irritation
 Further information
 The reference company name of written contents:
 Company: Hoffman Fine Chemicals Pty Ltd
 Address: 4 46-50 Buchanan Road, Brooklyn, Victoria, 3012, Australia
 Email: info at hoffmanchemicals.com
 Telephone: 03 9315 3435
 Fax:

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The conditions or methods of handling, storage, contact, use or disposal of the product are beyond our control and may be beyond our knowledge. 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. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of having unknown hazards and toxicity, which differ greatly depending on the conditions and/or duration of handling, storage, contact, use and/or disposal. The products must be handled only by those who are familiar with specialized knowledge and have experience and/or under the guidance of those specialists throughout handling, storage, contact, use and disposal. Safe usage conditions shall be set up on each user's own responsibility. New information or amendments may be made to this SDS.

For the abovementioned reasons and others, the Company listed in Section 16.2 of this SDS and its affiliates do not assume responsibility and expressly disclaim any liability for loss, damage and/or expense arising out of or in any way connected with the handling, storage, contact, use and/or disposal of this product.

FineCh

Version: 1.0 Revision Date: 11/8/2022 Print Date: 11/8/2022