

MATERIAL SAFETY DATA SHEET**Product Name:** Tetrabutylammonium bromide**CAS No.:** 1643-19-2**Version:** 0**1. Identification**

Product Code : 90572
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2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
TETRABUTYLAMMONIUM BROMIDE	1643-19-2	09-100%

3. Hazards Identification

Emergency Overview : **WARNING! HARMFUL IF SWALLOWED. CAUSES IRRITATION**
Health Rating : 2 - Moderate
Flammability Rating : 0 - None
Reactivity Rating : 0 - None
Contact Rating : 3 - Severe
Potential Health Effects
Inhalation : Severe irritation or burns of mucous membranes.
Ingestion : None identified.
Skin Contact : Irritation.
Eye Contact : Irritation.
Chronic Exposure : No information found.
Aggravation of Pre-existing Conditions : No information found

4. First Aid Measures

General information : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention
Ingestion : Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

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- Skin Contact** : Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire fighting measures

Fire	:	Not considered to be a fire hazard. Irritating and toxic ammonia gas may form in fires
Explosion	:	None identified.
Fire Extinguishing Media	:	Water, dry chemical, foam or carbon dioxide.
Special Information	:	Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

6. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures** : Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Sweep up and place in a clearly labeled container for chemical waste.
Clean surface thoroughly to remove residual contamination.
- Notification Procedures** : Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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- Precautions for safe handling** : Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Avoid inhalation of dust. Wash thoroughly after handling.
- Conditions for safe storage, including any incompatibilities** : Keep containers tightly closed. Store in cool, dry place. Store in a well-ventilated place.

8. Exposure Controls Personal Protection

- Control parameters**
Occupational exposure limits : None established.
Ventilation System : A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.
- Personal Respirators (NIOSH Approved):** : For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.
- Skin Protection** : Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Eye Protection:** : Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.
- Other** : Wear suitable protective clothing.
- Respiratory protection** : In case of inadequate ventilation use suitable respirator.
- Hygiene measures** : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

9. Physical and Chemical Properties

- Appearance** : White Crystalline solid.
Odor : No information found.
pH : No information found.
Melting point/freezing point : No information found.
Initial boiling point and boiling : No information found.

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range	:	
Flash Point	:	No information found.
Vapor pressure	:	Not applicable
Vapor density	:	Not applicable
Relative density	:	No information found.
Solubility in water	:	Appreciable (> 10%)
Solubility (other)	:	No data available.
Formula	:	NH ₄ HCO ₃
Molecular Weight	:	322.38 g/mol

10. Stability and Reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use .
Chemical stability	:	Material is stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	No information found.
Incompatible materials	:	No information found.
Hazardous decomposition products	:	Amines, hydrogen bromide.

11. Toxicological Information**Information on likely routes of exposure**

Ingestion	:	No information found.
Inhalation	:	No information found.
Skin contact	:	No information found.
Eye contact	:	No information found.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product	:	No information found.
Dermal Product	:	No information found.
Inhalation Product	:	No information found.
Repeated dose toxicity Product	:	No information found.
Skin corrosion/irritation Product	:	No information found.

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Serious eye damage/eye irritation Product	:	No information found.
Respiratory or skin sensitization Product	:	No information found.
Carcinogenicity Product	:	This substance has no evidence of carcinogenic properties.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE	:	No carcinogenic components identified.
US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE	:	No carcinogenic components identified.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	:	No carcinogenic components identified.
Germ cell mutagenicity In vitro Product	:	No mutagenic components identified.
In vivo Product	:	No mutagenic components identified.
Reproductive toxicity Product	:	No components toxic to reproduction.
Specific target organ toxicity - single exposure Product	:	No information found.
Specific target organ toxicity - repeated exposure Product	:	No information found.
Aspiration hazard Product	:	No information found.
Other effects	:	No information found.

12. Ecological Information**Ecotoxicity****Acute hazards to the aquatic environment :****Fish Product** : No information found**Aquatic invertebrates Product** : No information found**Chronic hazards to the aquatic environment :****Fish Product** : No information found**Aquatic invertebrates Product** : No information found**Toxicity to Aquatic Plants Product:** : No information found**Persistence and degradability****Biodegradation Product** : No information found**BOD/COD ratio Product** : No information found**Bioaccumulative potential****Bioconcentration factor (BCF)** : No information found

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	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT			Not regulated		
IMDG			Not regulated		
IATA			Not regulated		

15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

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