

Section 1. Product and Company Identification

Product Name n-Butyl Iodide
CAS Number 542-69-8

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EMERGENCY RESPONSE NUMBER
CHEMTEL
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Section 2. Hazards Identification

Classification of the substance or mixture

OSHA Hazards: Flammable liquid

GHS Classification

Flammable liquids (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Specific Target Organ Toxicity - Single Exposure (Category 3)
Acute Aquatic Toxicity (Category 3)

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statements

H226: Flammable liquid and vapor.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H402: Harmful to aquatic life.

Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces - No smoking



- P233: Keep container tightly closed
- P240: Ground/bond container and receiving equipment
- P241: Use explosion-proof electrical/ventilating/light equipment
- P242: Use only non-sparking tools
- P243: Take precautionary measures against static discharge
- P280: Wear protective gloves/eye protection/face protection
- P303+361+353: If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- P370+378: In case of fire: Use dry chemical: foam: carbon dioxide; others with caution for extinction
- P403+235: Store in a well ventilated place. Keep cool
- P501: Dispose of contents/container in accordance to all regulations.
- P264: Wash thoroughly after handling
- P332+313: If skin irritation occurs: Get medical advice/attention
- P362: Take off contaminated clothing and wash before reuse. **Discard contaminated shoes.**
- P305+351+338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing
- P337+313: If eye irritation persists get medical advice/attention
- P261: Avoid breathing fume/gas/mist/vapors/spray
- P271: Use only in a well-ventilated area
- P304+340: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P312: Call a poison center or doctor/physician if you feel unwell
- P403+233: Store in a well ventilated place. Keep container tightly closed
- P273: Avoid release to the environment

Section 3. Composition / Information on Ingredients

Common Name n-Butyl Iodide
Synonym(s) Iodobutane; 1-Iodobutane
Formula CH₃(CH₂)₃I
CAS Number 542-69-8

COMPONENT	CAS NUMBER	CONCENTRATION
n-Butyl Iodide	542-69-8	100%

Section 4. First Aid Measures

Flammable. Harmful in contact with skin and if swallowed. Causes blisters, Symptoms: burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting. Cancer suspect agent. The toxicological properties of this material have not been fully investigated.

Potential Health Effects

Eye: Causes eye burns. May cause irreversible eye injury.

Skin: Causes skin irritation.



Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.

Inhalation: Causes respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. Material may be irritating to mucous membranes and upper respiratory tract.

Chronic: Overexposure may cause delayed kidney injury.

Emergency and First Aid: Not to be construed as a medical recommendation

Eyes: Irrigate thoroughly with water for 15 minutes.

Lungs: Remove to fresh air; administer artificial respiration or oxygen as needed.

Ingestion: Harmful if swallowed. Consult physician.

Skin: Flush with water for 15 minutes. Remove & wash contaminated clothing and shoes. Get medical aid if irritation develops or persists

Section 5. Firefighting Measures

Flash Point (Closed Cup): 33°C

Extinguishing Media: Dry chemical: foam: carbon dioxide; others with caution. Water may be ineffective. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray.

Explosion Hazards: Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions. Forms explosive mixtures in air.

Special Fire Fighting Procedures: Self-contained breathing apparatus; if possible, when in area of fire, keep drums cool with spray or use foam.

Unusual Fire and Explosion Hazards: Dangerous when heated to decomposition. It emits highly toxic iodide fumes. Will react with steam to produce toxic and acidic corrosive fumes. Vapor may travel considerable distance to source of ignition and flash back. Emits toxic fumes under fire conditions.

Section 6. Accidental Release Measures

Steps to be taken in case material is released or spilled: Shut off all sources of ignition, evacuate area. Absorb spill with activated carbon or inert material (eg. vermiculite, sand or earth). Containerize, transport outdoors. Clean spills immediately. Ventilate area and wash down. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Section 7. Handling and Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.



Storage: Store in a cool, dry place out of direct sunlight. Store in tightly sealed drums. Open carefully. Keep away from heat, sparks, and flame. Keep away from sources of ignition. Light sensitive.

Section 8. Exposure Controls / Personal Protection

Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels. Facilities must have safety shower and eye bath. Use non-sparking tools. Mechanical exhaust required.

Respiratory: In most vapor concentrations: self-contained breathing apparatus. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 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.

Ventilation: Mechanical and local. Maintain level of less than 4 ppm.

Protective Gloves: Rubber, compatible chemical-resistant gloves.

Eyes: Goggles & Full face shield.

Hygiene: Wash thoroughly after handling. Wash contaminated clothing before reuse.

Other: Apron and rubber shoes to prevent contamination of clothing.

Section 9. Physical and Chemical Properties

Physical State: Liquid

Formula Weight: 184.02

Boiling Point: 130°C - 131°C.

Freezing/Melting Point: -103°C

Flash Point: 92°F (33.33°C)

Refractive Index: 1.499

Specific Gravity: 1.671 (200)

Vapor Pressure: Moderate

Vapor Density: about five

Solubility in Water: practically insoluble

Percent Volatile: approximately 100%

Appearance and Odor: Halide-ether like odor; clear and light yellow to red colored liquid

Section 10. Stability and Reactivity

Stability: Stable, Avoid excessive heat.

Incompatibility: Strong oxidizing agents and bases

Conditions to Avoid: High temperatures, mechanical shock, incompatible materials, light, ignition sources

Hazardous decomposition products: CO, CO₂, HI

Hazardous polymerization: Will not occur



Section 11. Toxicological Information

RTECS: EK4400000

Beilstein Registry Number: 1420755

MDL number: MFCD00001098

LC₅₀ inhalation rat: LC₅₀ = 6100 mg/m³ /4h

LD₅₀ Intraperit. rat: LD₅₀ = 692 mg/kg

LD₅₀ Intraperit. mouse: LD₅₀ = 101 mg/kg

Threshold Limit Value: Not established

References

Sax: 6,589

Merck: 10,1546

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

Section 12. Ecological Information

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

Shipping: TSCA Listed

HMIS Rating

Health: 3

Flammability: 3

Reactivity: 0

Personal Protection: K [airline hood or mask, gloves, full protective suit, boots]

Freight Classification: UN1993, Flammable liquids N.O.S., Class 3, PG III

PIH: Not PIH

ERG: 128



Section 15. Regulatory Information

WGK (Water Danger/Protection): CAS# 542-69-8: Not available

Canada: CAS# 542-69-8 is listed on Canada's DSL List

US Federal: CAS# 542-69-8 is listed on the TSCA Inventory.

US Classification and Label Text

Indication of Danger: Flammable. Harmful.

Risk Statements: Flammable. Harmful by inhalation.

Safety Statements: Keep away from sources of ignition - no smoking. Wear suitable protective clothing, gloves, and eye/face protection.

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16. Other Information

Disclaimer: 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.

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