

MATERIAL SAFETY DATA SHEET

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Issue Date:

1- Chemical Product Information and Company Identification.

Product Name: : 1-Bromobutane GC Reference Standard, AnStan[®].
Synonym: : Butyl Bromide.
Product code: : BS11898.
CAS Number: : 109-65-9.
Company Name: : Briti Scientific.
Company Address: : Plot No:78/B/13, SY-79,Phase-VI, Jeedimetla,Hyderabad-500 055.
Telangana, India.

Section 2- Composition / Information on Ingredients.

CAS No.	Chemical Name	Mol. Formula
109-65-9.	Butyl Bromide.	C ₄ H ₉ Br.

Section 3- Hazards Identification.

Flammable liquids	Category 2
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2

Label Elements

Signal Word

Danger

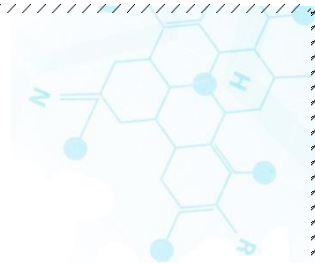
Hazard Statements

Highly flammable liquid and vapor
Causes skin irritation
Causes serious eye irritation



USA: #1004, Boston, Massachusetts, 02116, United States. India: Jeedimetla, Hyderabad-500 055, Telangana.

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Precautionary Statements

Prevention

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Wear protective gloves/protective clothing/eye protection/face protection
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ventilating/lighting/equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Use only outdoors or in a well-ventilated area
- Avoid breathing dust/fume/gas/mist/vapors/spray

Inhalation

- Call a POISON CENTER or doctor/physician if you feel unwell
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

- Call a POISON CENTER or doctor/physician if you feel unwell
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- Take off contaminated clothing and wash before reuse

Eyes

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth

Fire

- In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

- Store in a well-ventilated place. Keep cool

Disposal

- Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

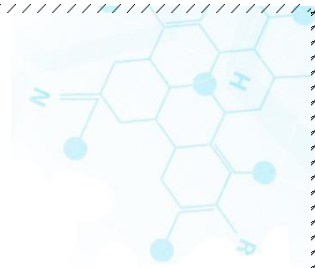
- None identified

Section 4- First Aid Measures.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.





Inhalation: Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration.

Ingestion: Do NOT induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and effects

Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Notes to Physician Treat symptomatically

Section 5- Fire Fighting Measures.

Suitable Extinguishing Media: Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Water mist maybe used to cool closed containers.

Unsuitable Extinguishing Media: No information available

Flash Point 10 °C / 50 °F

Method - No information available

Autoignition Temperature 265 °C / 509 °F

Explosion Limits

Upper 7.0 vol %

Lower 2.6 vol %

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrogen chloride gas.

Protective Equipment and Precautions for Firefighters

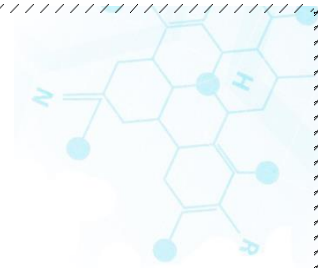
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

Section 6- Accidental Release Measures.

Personal Precautions: Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation.

Environmental Precautions: Should not be released into the environment. See Section 12 for additional Ecological Information. . Do not flush into surface water or sanitary sewer system.





Methods for Containment and Clean Up:

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment

Section 7- Handling and Storage.

Handling: Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Uses park-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Refrigerator/flammables.

Section 8- Exposure Control/Personal Protection.

Exposure Guidelines: This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or EuropeanStandardEN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

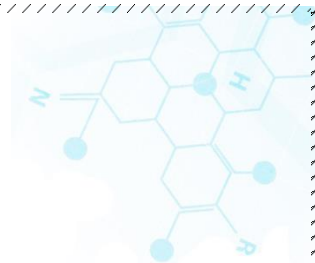
Respiratory Protection No protective equipment is needed under normal use conditions.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Section 9- Physical and Chemical Properties.

Appearance	Colourless clear liquid.
Odor	Strong
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-112 °C
Boiling Point/Range	103 °C
Flash Point	10 °C / 50 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	





Upper 7.0 vol %
Lower 2.6 vol %
Vapor Pressure 34 mmHg @ 20 °C
Density 1.273 g/cm³
Solubility Soluble in ether.
Partition coefficient; n-octanol/water No data available
Autoignition Temperature 265 °C / 509 °F
Decomposition Temperature No information available
Viscosity No information available
Molecular Formula C₄ H₉ Br
Molecular Weight 137.02

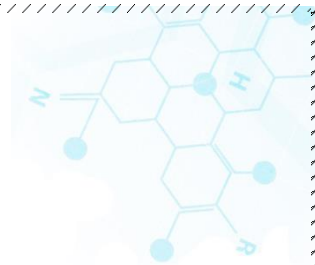
Section 10- Stability and Reactivity.

Reactive Hazard: None known, based on information available
Stability: Stable under normal conditions.
Conditions to Avoid: Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.
Incompatible Materials: Strong oxidizing agents, Strong bases, Metals
Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO₂), Hydrogen halides
Hazardous Polymerization: Hazardous polymerization does not occur.
Hazardous Reactions: None under normal processing.

Section 11- Toxicological Information.

Toxicologically Synergistic Products
No information available
Delayed and immediate effects as well as chronic effects from short and long-term exposure
Irritation May cause skin, eye, and respiratory tract irritation
Sensitization No information available
Mutagenic Effects No information available
Reproductive Effects No information available.
Developmental Effects No information available. Teratogenicity No information available. STOT - single exposure None known
STOT - repeated exposure None known
Aspiration hazard No information available
Symptoms / effects, both acute and delayed
Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Endocrine Disruptor Information No information available
Other Adverse Effects The toxicological properties have not been fully investigated.





Section 12- Ecological Information.

Persistence and Degradability Persistence is unlikely based on information available. **Bioaccumulation/ Accumulation** No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component Butyl bromide
log Pow 2.75

Section 13- Disposal Considerations.

Waste Disposal Methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Section 14- Transport Information.

DOT

UN-No UN1126
Proper Shipping Name 1-BROMOBUTANE
Hazard Class 3
Packing Group II

TDG

UN-No UN1126
Proper Shipping Name 1-BROMOBUTANE
Hazard Class 3
Packing Group II

IATA

UN-No UN1126
Proper Shipping Name 1-BROMOBUTANE
Hazard Class 3
Packing Group II

IMDG/IMO

UN-No UN1126
Proper Shipping Name 1-BROMOBUTANE
Hazard Class 3
Packing Group II

Section 15- Regulatory Information.

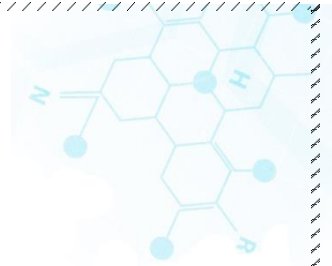
U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable





Clean Air Act Not applicable

OSHA - Occupational Safety and

Health Administration

Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland

Security

This product does not contain any DHS chemicals. Other International Regulations

Mexico - Grade No information available

Section 16- Other Information.

Briti Scientific provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

