



TOKYO CHEMICAL INDUSTRY CO., LTD.

1-Bromobutane

Revision 2
number:

Revision date: 03/04/2023

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SAFETY DATA SHEET

1. IDENTIFICATION

Product name: 1-Bromobutane
Product code: B0560
Company: TOKYO CHEMICAL INDUSTRY CO., LTD.
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Revision number: 2

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids Category 2

HEALTH HAZARDS

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2A

Germ cell mutagenicity Category 2

ENVIRONMENTAL HAZARDS

Acute aquatic hazard Category 2

Label elements

Pictograms or hazard symbols



Signal word

Hazard statements

Danger

Highly flammable liquid and vapour

Causes skin irritation

Causes serious eye irritation

Suspected of causing genetic defects

Toxic to aquatic life

Precautionary statements

[Prevention]

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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 and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Avoid release to the environment.

Wash hands and face thoroughly after handling.

Wear protective gloves, protective clothing, face protection.

[Response]

IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

IF exposed or concerned: Get medical advice or attention.

[Storage]

Store in a well-ventilated place. Keep cool.

Store locked up.

[Disposal]

Dispose of contents and container in accordance with local, regional, national

regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Components:	1-Bromobutane
Percent:	>98.0%(GC)
CAS RN:	109-65-9
Synonyms:	Butyl Bromide
Chemical Formula:	C ₄ H ₉ Br
Notice Through Official Gazettes Reference Number	
ENCS:	(2)-74
ISHL:	Official announcement chemistry substance.

4. FIRST-AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get medical advice/attention.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical advice/attention.
Ingestion:	Get medical advice/attention. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, water spray, carbon dioxide.
Unsuitable extinguishing media:	Solid streams of water
Specific hazards arising from the chemical:	Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.
Precautions for firefighters:	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.
Special protective equipment for firefighters:	When extinguishing fire, be sure to wear personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:	Prevent product from entering drains.
Methods and materials for containment and cleaning up:	Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
Prevention of secondary hazards:	Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures: Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling.
Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.

Advice on safe handling: Avoid all contact!

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up.
Store away from incompatible materials such as oxidizing agents.

Packaging material: Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust. Also install safety shower and eye bath.

Control parameters: Not set up

Personal protective equipment

Respiratory protection: Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

Hand protection: Impervious gloves.

Eye protection: Safety goggles. A face-shield, if the situation requires.

Skin and body protection: Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Liquid
Form: Clear
Colour: Colorless - Almost colorless
Odour: No data available
Melting point/freezing point: -112°C
Boiling point/range: 101°C
Flammability(solid, gas): No data available
Flash point: 13°C
Autoignition temperature: 265°C
Flammability or explosive limits:
Lower: 2.6%
Upper: 6.6%
pH: No data available
Kinematic viscosity: No data available
Vapour pressure: 5.6kPa/25°C
Solubility(ies):
[Water] Insoluble (868.7mg/L, 25°C)
[Other solvents]
Soluble: Ether, Alcohols, Acetone, Chloroform
Log Pow: 2.75
Relative density: 1.28
Vapour density: 4.72
Particle characteristics: No data available

10. STABILITY AND REACTIVITY

Reactivity: No data available
Chemical stability: Stable under proper conditions.
Possibility of hazardous reactions: No special reactivity has been reported.
Conditions to avoid: Spark, Open flame, Static discharge
Incompatible materials: Oxidizing agents, Strong bases
Hazardous decomposition products: Carbon dioxide, Carbon monoxide, Hydrogen bromide

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	ihl-rat LC50:47000 mg/m ³ /2H ihl-mam LC50:25800 mg/m ³ ipr-rat LD50:4450 mg/kg orl-rat LD50:2761 mg/kg
Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Germ cell mutagenicity:	No data available
Carcinogenicity:	
IARC =	No data available
NTP =	No data available
Reproductive toxicity:	No data available
STOT-single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard:	No data available
RTECS Number:	EJ6225000

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	72% (by BOD) , 90% (by TOC) , 98% (by GC)
Bioaccumulative potential(BCF):	13.5
Mobility in soil	
Log Pow:	2.75
Soil adsorption (Koc):	81
Henry's Law (PaM³/mol):	882
Other adverse effects:	No data available

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

14. TRANSPORT INFORMATION

UN-No:	1126
Proper shipping name:	1-Bromobutane
Hazards Class:	3: Flammable liquid.
Packing group:	II
Specific precautionary transport measures and conditions:	

15. JAPANESE REGULATORY INFORMATION

Fire Defense Law:	Class-4 No.1 petroleums Dangerous grade 2 Not water-soluble fluid
ISHL(Article 28 (3)):	Publication of Technical Guidelines
ISHL(on Mutagen List):	on Mutagen List.
ISHL(Enforcement Order of the Industrial Safety and Health Act Appended Table 1):	Inflammable Substances
Law for safety of vessels:	Hazardous materials notification, Schedule form No.1 Flammable liquid

16. OTHER INFORMATION**The reference company name of written contents**

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This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. 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 handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.