



TCI AMERICA

SAFETY DATA SHEET

Revision number: 1
Revision date: 07/06/2018

1. IDENTIFICATION

Product name: 1-Butanethiol
Product code: B0685

Product use: For laboratory research purposes.
Restrictions on use: Not for drug or household use.

Company:
TCI America
9211 N. Harborgate Street
Portland, OR 97203 U.S.A.
Telephone:
+1-800-423-8616 / +1-503-283-1681
Fax:
+1-888-520-1075 / +1-503-283-1987
e-mail:
sales-US@TCIchemicals.com
www.TCIchemicals.com

Emergency telephone number:
Chemical Emergencies:
TCI America (8:00am - 5:00pm) PST
+1-503-286-7624
Transportation Emergencies:
Chemtrec 24-Hour
+1-800-424-9300 (U.S.A.)
+1-703-527-3887 (International)
Responsible department:
TCI America
Environmental Health Safety and Security
+1- 503-286-7624

2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200: Acute Toxicity - Oral [Category 4]
WHMIS 2015: Acute Toxicity - Inhalation [Category 4]
Eye Damage/Irritation [Category 2B]
Toxic to Reproduction [Category 2]
Specific Target Organ Toxicity (Single Exposure) [Category 2]
Specific Target Organ Toxicity (Single Exposure) [Category 3]
Flammable Liquids [Category 2]

Signal word: Danger!

Hazard Statement(s): Highly flammable liquid and vapor
Harmful if swallowed or if inhaled
Causes eye irritation
Suspected of damaging fertility or the unborn child
May cause damage to organs: Blood
May cause respiratory irritation. May cause drowsiness or dizziness.

Pictogram(s) or Symbol(s):



Precautionary Statement(s):
[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 and hot surfaces. – No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist, vapors or spray. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Wear protective gloves, protective clothing, face protection.

[Response]

If swallowed: Call a poison center or doctor if you feel unwell. Rinse mouth. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. 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: Call a poison center or doctor. In case of fire: Use dry chemical, dry sand or foam to extinguish.

[Storage]
[Disposal]

Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Dispose of contents and container in accordance with local, regional, national regulations (e.g. US: 40 CFR Part 261, EU:91/156/EEC, JP: Waste Disposal and Cleaning Act, etc.).

Hazards not otherwise classified: Causes mild skin irritation.

[HNOC]

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Components:	1-Butanethiol
Percent:	>97.0%(GC)
CAS RN:	109-79-5
Molecular Weight:	90.18
Chemical Formula:	C ₄ H ₁₀ S
Synonyms:	Butyl Mercaptan

4. FIRST-AID MEASURES**Description of first aid measures**

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Call a POISON CENTER or doctor/physician.
Ingestion:	Call a POISON CENTER or doctor/physician. Rinse mouth.

Symptoms/effects:

Acute:	Dizziness. Redness. Drowsiness.
Delayed:	May have effects on the respiratory tract.

Indication of any immediate medical attention:

Not available.

Notes to physician:

No data available

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, carbon dioxide.
Unsuitable extinguishing media:	Water (It may scatter and spread fire.)
Hazardous combustion products:	These products include: Carbon oxides Sulfur oxides
Other specific hazards:	Closed containers may explode from heat of a fire.
Advice for firefighters:	Wear self-contained breathing apparatus if possible.

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:	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. 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 under inert gas. Store locked up. Store away from incompatible materials such as oxidizing agents. Air-sensitive
Packaging material:	Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure limits:**

ACGIH TLV(TWA):	0.5 ppm
OSHA PEL(TWA):	0.5 ppm

Appropriate engineering controls: Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust. Also install safety shower and eye bath.

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
Odour:	Stench
Odor threshold:	No data available
Odour threshold:	No data available

Melting point/freezing point:	No data available	pH:	No data available
Boiling point/range:	98°C (208°F)	Vapour pressure:	No data available.
Decomposition temperature:	No data available	Vapour density:	3.1
Relative density:	0.84	Dynamic Viscosity:	No data available
Kinematic viscosity:	No data available	Evaporation rate(Butyl Acetate=1):	No data available
Log Pow:	No data available		

Flash point:	2°C (36°F)	Autoignition temperature:	522°C (972°F)
Flammability(solid, gas):	No data available	Flammability or explosive limits:	
		Lower:	1.4%
		Upper:	11.3%

Solubility(ies):	
[Water]	Very slightly soluble (0.06g/100mL)
[Other solvents]	
Soluble:	Ether, Alcohols

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 acids, Bases, Alkali metals
Hazardous decomposition products:	Carbon monoxide, carbon dioxide etc

11. TOXICOLOGICAL INFORMATION

RTECS Number: EK6300000

Acute Toxicity:

ihl-rat LC50:4020 ppm/4H
 orl-mus LD50:3 g/kg

ipr-rat LD50:399 mg/kg
 orl-rat LD50:1500 mg/kg

Skin corrosion/irritation:

No data available

Serious eye damage/irritation:

eye-rbt 83 mg

Respiratory or skin sensitization:

No data available

Germ cell mutagenicity:

No data available

Carcinogenicity:

No data available

IARC: No data available

NTP: No data available

OSHA: No data available

Reproductive toxicity:

ihl-mus TCLo: 68 ppm/6H (6-16D preg)

Target organ(s):

May cause damage to organs: Blood

May cause respiratory irritation.

May cause drowsiness or dizziness.

12. ECOLOGICAL INFORMATION**Ecotoxicity:**

Fish: No data available

Crustacea: No data available

Algae: No data available

Persistence / degradability:

No data available

Bioaccumulative potential(BCF):

No data available

Mobility in soil

Log Pow: 2.28

Soil adsorption (Koc): No data available

Henry's Law (PaM³/mol): No data available

13. DISPOSAL CONSIDERATIONS**Disposal of product:**

Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil.

Disposal of container:

Dispose of as unused product. Do not re-use empty containers.

Other considerations:

Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: UN2347	Proper Shipping Name: Butyl mercaptan	Class or Division: 3 Flammable liquid	Packing Group: II
-----------------------------	---	---	-----------------------------

IATA

UN number: UN2347	Proper Shipping Name: Butyl mercaptan	Class or Division: 3 Flammable liquid	Packing Group: II
-----------------------------	---	---	-----------------------------

IMDG

UN number: UN2347	Proper Shipping Name: Butyl mercaptan	Class or Division: 3 Flammable liquid	Packing Group: II
-----------------------------	---	---	-----------------------------

EmS number: F-E, S-D

15. REGULATORY INFORMATION**Toxic Substance Control Act (TSCA 8b.):**

This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

US Federal Regulations**CERCLA Hazardous substance and Reportable Quantity:**

SARA 313:	Not Listed
SARA 302:	Not Listed

State Regulations**State Right-to-Know**

Massachusetts	Listed
New Jersey	Listed
Pennsylvania	Listed

California Proposition 65:	Not Listed
-----------------------------------	------------

Other Information**NFPA Rating:**

Health:	2
Flammability:	3
Instability:	0

HMIS Classification:

Health:	2
Flammability:	3
Physical:	0

International Inventories

Canada: DSL	On DSL
EC-No:	203-705-3

16. OTHER INFORMATION

Revision date: 07/06/2018

Revision number: 1

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.