

I. PRODUCT AND COMPANY IDENTIFICATION

Company:	Natural Advantage, LLC	Address:	1050 Cypress Creek Road Oakdale, Louisiana 71463
Telephone:	318-215-1456	Fax:	318-335-1579
Product Name:	1, Butanethiol, Natural	Chemical Name:	1-Butanethiol
Product Number:	NA3478		

EMERGENCY 24 HOUR CONTACT: ChemTrec	1-800-424-9300 Contract # 219030
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II. HAZARDS IDENTIFICATION2.1 Classification of the substance or mixture

Classification according to Regulation 29 CFR 1910.1200

Flammable Liquids	Category 2
Acute Toxicity, Oral	Category 4
Acute Toxicity, Inhalation	Category 4
Skin Irritation	Category 2
Eye Irritation	Category 2A
Skin Sensitization	Category 1
Specific Target Organ Toxicity-single exposure-Respiratory System	Category 3

NFPA Hazard Rating: Health: 2 Fire: 3 Reactivity: 0

Labeling according to Regulation 29 CFR 1910.1200:

Pictogram:



Signal word: Danger

Hazard statement:

H225 Highly flammable liquid and vapour.
H302+H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

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/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/eye protection/face protection.
P301+P312+P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340+P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403+P235+P405+P233 Store in a well-ventilated place. Keep cool. Keep container tightly closed.

III. COMPOSITION/INFORMATION ON INGREDIENTS

Product Name:	1-Butanethiol, Natural	Chemical Name:	1-Butanethiol
Synonyms:	n-Butyl Mercaptan, n-Thiobutyl Alcohol	CAS#:	109-79-5
Formula:	C ₄ H ₁₀ S	EINECS#:	203-705-3
Molecular Wt.:	90.19 g/mol		

IV. FIRST AID MEASURES

Inhalation	Remove from the exposure to fresh air. Contact a physician as necessary. If breathing is irregular or has stopped, start resuscitation and administer oxygen if available.
Eye Contact	Flush immediately with clean water for at least 15 minutes. Contact a physician if irritation persists.
Skin Contact	Remove any contaminated clothing or shoes. Wash affected areas thoroughly with soap and water. If irritation persists, contact a physician.
Ingestion	Do NOT induce vomiting. Give water to dilute. Contact a physician immediately.

V. FIRE-FIGHTING MEASURES

Flashpoint (Method Used):	12.78°C (55°F)(CC)
Lower Flammable Limit (% by Volume):	Information Not Applicable
Upper Flammable Limit (% by Volume):	Information Not Applicable
Extinguishing Media:	Water spray, Alcohol-resistant foam, dry chemical or carbon dioxide.
Special Fire Fighting Procedures:	Self-contained breathing apparatus and protective clothing should be worn when fighting fires involving chemicals.
Unusual Fire and Explosion Hazards:	None
NFPA Hazard Rating:	Health: 2 Fire: 3 Reactivity: 0

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VI. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled.	Eliminate all ignition sources. Ventilate area. Contain spill and recover free product. Report spill to appropriate authorities if required.
Waste Disposal Method	Place material into sealed containers and dispose of in accordance with current applicable laws and regulations.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

Precautions to be taken in handling and storing.	Avoid inhalation and contact with skin and eyes. Good personal hygiene practices should be used. Wash after any contact, before breaks and meals, and at the end of the work period. Contaminated clothing and shoes should be cleaned before re-use. Good manufacturing practices dictate that an eyewash fountain and/or safety shower should be available in the work area.
Other Precautions:	None.

VIII. CONTROL MEASURES

Occupational Exposure Limits:	1-Butanethiol (CAS 109-79-5) TWA 0.500000 ppm 1.800000 mg/m3
Respiratory Protection:	None generally required. If desired use NIOSH approved respirator.
Ventilation:	Local exhaust meeting ACGIH criteria as needed.
Protective Gloves:	Use chemical resistant gloves.
Protective Eyewear:	Use splash goggles or face shield when eye contact might occur.
Other Protective Clothing or Equipment:	None required.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	98°C	Specific Gravity (H ₂ O = 1):	0.833-0.851
Vapor Pressure (mm Hg):	Information Not Available	Flash Point:	12.78°C (55°F)
Vapor Density (AIR =1):	3.11	Melting Point:	Information Not Available
Solubility in Water:	Insoluble	Evaporation Rate:	Information Not Available
pH:	Information Not Available	Color:	Colorless to Light Yellow
Flammability (solid, gas):	Information Not Available	Oxidizing properties:	Information Not Available
Upper/lower flammability or explosive limits:	Information Not Available	Odor:	Garlic, Putrid
Autoignition temperature:	Information Not Available	Partition coefficient:	Information Not Available
Viscosity:	Information Not Available	Decomposition temperature:	Information Not Available
Appearance:	Clear Liquid	Explosive properties:	Information Not Available

X. REACTIVITY DATA

Stability:	Chemically Stable under recommended storage conditions.	Conditions to Avoid: Heat, flames, and sparks.
Incompatibility with other Substance (Materials to Avoid):	Strong oxidizing agents, Bases, Alkali Metals	
Hazardous Decomposition or Byproducts:	Carbon Oxides	
Hazardous Polymerization:	No	

XI. TOXICOLOGICAL INFORMATION

Acute toxicity: LD50-oral-rat-1,500 mg/kg LC50-inhalation-rat-4h-4020 ppm		Skin corrosion/irritation:	May be harmful
Serious eye damage/eye irritation:	Mild irritation 24 h	Respiratory or skin sensitization:	Buehler Test-Guinea Pig Result- May cause sensitization by skin contact.
Germ cell mutagenicity:	Information Not Available	Reproductive toxicity:	Information Not Available
Specific target organ toxicity (single exposure):	Inhalation-May cause respiratory irritation.	Specific target organ toxicity (repeated exposure):	Information Not Available
Aspiration hazard:	May be harmful		
Carcinogenicity:	1-Butanethiol is not listed as carcinogenic by IARC, ACGIH, NTP, or OSHA.		

XII. ECOLOGICAL INFORMATION

Toxicity: LC50-Ictalurus punctatus	-1,100 mg/l-96h	Persistence and Degradation:	Information Not Available
Bioaccumulative potential:	Information Not Available	Mobility in soil:	Information Not Available
PBT and vPvB assessment:	Information Not Available	Other adverse effects:	Information Not Available

XIII. DISPOSAL CONSIDERATIONS

Product:	Observe all federal, state, and local environmental regulations in disposing this material.
Contaminated packaging:	Dispose of as unused product.

XIV. TRANSPORTATION INFORMATION

DOT (US) Proper Shipping Name:	UN Number: 2347 Butyl Mercaptans	Class: 3 Marine pollutant: No	Packing Group: II Poison Inhalation Hazard: No
IMDG Proper Shipping Name:	UN Number: 2347 Butyl Mercaptans	Class: 3 Marine pollutant: No	Packing Group: II
IATA Proper Shipping Name:	UN Number: 2347 Butyl Mercaptans	Class: 3	Packing Group: II

XV. REGULATORY INFORMATION

OSHA Hazards	Flammable Liquid, Fire Hazard
US Federal	TSCA: CAS# 109-79-5 is listed on the TSCA Inventory California Prop. 65: This product does not contain any chemicals known to cause cancer, birth defects, or any other reproductive harm.
SARA 311/312	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
Regulation	Complies with 29 CFR 1910.1200.

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XVI. OTHER INFORMATION

MSDS Creation Date: 12/12/2010

MSDS Revision #: 4

Revision Date: 03/07/2018

Liability Statement: 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. Natural Advantage, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.

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