

Safety Data Sheet

n-Butyric Acid

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: n-Butyric Acid
Recommended Use: Science education applications
Synonyms: Ethylacetic Acid, Butanoic Acid
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



Combustible Liquid Harmful if swallowed. Toxic in contact with skin. Causes serious eye damage. Harmful to aquatic life.

GHS Classification:

Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity - Dermal Category 3, Hazardous to the aquatic environment - Acute Category 3, Flammable Liquid Category 4, Acute Toxicity - Oral Category 4

Acute Toxicity Inhalation Gas Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Vapor Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Dust/Mist Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
n-Butyric Acid	107-92-6	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact: IF ON SKIN: Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5 Firefighting Procedures

Extinguishing Media: Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid.

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Fire Fighting Methods and Protection:	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards:	Fire or excessive heat may produce hazardous decomposition products. Explosive when mixed with oxidising substances.
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:	Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. Evaporation of volatile substances can lead to the displacement of air creating an environment that can cause asphyxiation. Isolate area. Keep unnecessary personnel away. Avoid breathing dust/fume/gas/mist/vapors/spray. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Block any potential routes to water systems.
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Section 7 Handling and Storage

Handling:	Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Keep container tightly closed in a cool, well-ventilated place. Use only in well-ventilated areas. Avoid contact with skin and eyes. Avoid contact with clothing. Harmful if swallowed. Do not breathe gas/fumes/vapor/spray. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Keep away from ... (incompatible materials to be indicated by the manufacturer). Keep away from sources of ignition - No smoking.
Storage:	Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed in a cool, well-ventilated place.
Storage Code:	White - Corrosive. Separate acids from bases; separate oxidizer acids from organic acids.

Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures:	No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use. Good general room ventilation should be sufficient to control airborne contaminants to safe levels.
Personal Protective Equipment (PPE):	Lab coat, apron, eye wash, safety shower.
Respiratory Protection:	No respiratory protection required under normal conditions of use. Wear a NIOSH approved respirator if levels above the exposure limits are possible.
Respirator Type(s):	NIOSH approved air purifying respirator with dust/mist filter.
Eye Protection:	Wear chemical splash goggles when handling this product. Have an eye wash station available.
Skin Protection:	Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Where use can result in skin contact, practice good personal hygiene. Use impervious gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly.
Gloves:	Butyl rubber

Section 9 Physical Data

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Formula: CH₃(CH₂)₂COOH
Molecular Weight: N/A
Appearance: Liquid
Odor: Moderate Acrid
Odor Threshold: No data available
pH: 3.0 at 10 g/l at 20 °C
Melting Point: 5 C
Boiling Point: 162 C
Flash Point: 72 C
Flammable Limits in Air: LEL: 2% UEL: 10%

Vapor Pressure: 0.43 mm at 20°C
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): 3.04
Specific Gravity: 0.959 at 20°C
Solubility in Water: Soluble
Log Pow (calculated): 0.79 at 23 °C
Autoignition Temperature: 443 C
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: 100%

Section 10

Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known.
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: Carbon oxides
Hazardous Polymerization: Will not occur

Section 11

Toxicity Data

Routes of Entry: Inhalation, ingestion, eye or skin contact.
Symptoms (Acute): Respiratory disorders, , Eye disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
n-Butyric Acid	107-92-6	Oral LD50 Rat 1500 mg/kg Oral LD50 Mouse 1250 mg/kg	Dermal LD50 Rabbit 530 UL/KG	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available	107-92-6	Not listed	Not listed	Not listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.

Target Organ Effects:

Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12

Ecological Data

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife. Harmful to fish and other water organisms.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
n-Butyric Acid	107-92-6	24 HR LC50 LEPOMIS MACROCHIRUS 200 MG/L 24 HR EC50 DAPHNIA MAGNA 61.7 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS 46.7 MG/L

Section 13

Disposal Information

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Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
UN2820, Butyric acid, 8, PG III
Limited quantity equal to or less than 5 Lt.

Air - IATA Proper Shipping Name:
UN number: 2820 Class: 8 Packing group: III EMS-No: F-A, S-B
Proper shipping name: BUTYRIC ACID Marine pollutant: No

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
n-Butyric Acid	107-92-6	No	5000 lb RQ	5000 lb final RQ; 2270 kg final RQ	No	No

Section 16 Additional Information

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health