Section 1 Chemical Product and Company Identification

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Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
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CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**n-BUTYRIC ACID**
Synonyms	Ethylacetic Acid / Butanoic Acid

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS05
Target organs: Respiratory, Skin, Eyes

GHS Classification:
Skin corrosion (Category 1B)

GHS Label information: **Hazard statement:**
H314: Causes severe skin burns and eye damage.

Precautionary statement:
P260: Do not breathe mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363: Wash contaminated clothing before reuse.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310: Immediately call a POISON CENTER or doctor.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
n-Butyric acid	107-92-6	100%	203-532-3

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE DAMAGE. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SEVERE BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. In contact with easily oxidizable materials, this chemical may react rapidly enough to cause ignition, violent combustion or explosion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Butyric acid	Not established	Not established	Not established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid.
Odor: Strong, penetrating odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: -5.2°C (23°F)
Boiling point: 163.5°C (327°F)
Flash point: 72°C (161°F) CC

Evaporation rate (Butyl acetate **= 1):** 0.06
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: 2.0% / 10.0%
Vapor pressure (mm Hg): 0.43 @ 20°C
Vapor density (Air = 1): 3.04
Relative density (Specific gravity): 0.959 @ 20°/20°C
Solubility(ies): Soluble in water.

Partition coefficient: (n-octanol / water): Log Pow: 0.79
Auto-ignition temperature: 443°C (830°F)
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: $CH_3(CH_2)_2COOH$
Molecular weight: 88.11

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizers such as hydrogen peroxide, nitric acid, perchloric acid or chromium trioxice, strong alkalies such as sodium hydroxide.

Hazardous decomposition products: Oxides of carbon.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 1500 mg/kg ; Inhalation-rabbit LC50: >40 g/m^3
Skin corrosion/irritation: Skin-rabbit - Corrosive
Serious eye damage/irritation: Eyes-rabbit - Corrosive
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Sore throat. Cough. Burning sensation. Shortness of breath. Labored breathing. Symptoms may be delayed.
Ingestion: Burning sensation. Abdominal pain. Shock or collapse.
Skin: Pain. Redness. Blisters. Skin burns.
Eyes: Pain. Redness. Severe deep burns. Loss of vision.
Signs and symptoms of exposure: Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: ES5425000

Section 12 Ecological Information

Toxicity to fish: Leuciscus idus (fish, fresh water), LC50 = 250-480 mg/L/48 hours
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 61.7 mg/L/24 hours
Toxicity to algae: Scenedesmus subspicatus (Algae), EC50 = 46.7 mg/L/72 hours - growth rate
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN2820 **Shipping name:** Butyric acid
Hazard class: 8 **Packing group:** III **Reportable Quantity:** 5,000 lbs (2270 kg) **Marine pollutant:** No
Exceptions: Limited quantity equal to or less than 5 L **2016 ERG Guide #** 153

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Butyric acid	Listed	5,000 lbs,	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.