

n-BUTYRIC ACID

Material Safety Data Sheet

Mallinckrodt Chemical Inc.

P.O. Box 800

Paris, Kentucky 40362

Emergency Telephone Number
314-539-1600

Effective Date: 01-14-87 Supersedes 09-01-85

PRODUCT IDENTIFICATION:

Synonyms: Butanoic acid; n-butyric acid 99%

Formula CAS No.: 107-92-6

Molecular Weight: 88.11

Hazardous Ingredients: n-Butyric acid.

Chemical Formula: C4H8O2

PRECAUTIONARY MEASURES

DANGER! CORROSIVE. CAUSES BURNS. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. INHALATION MAY IRRITATE RESPIRATORY TRACT. COMBUSTIBLE.

Keep away from heat, sparks and flame.

Do not breathe vapor.

Avoid contact with eyes, skin and clothing.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

EMERGENCY FIRST AID

In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. In case of contact, immediately flush skin with plenty of water for at least 15 minutes. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, call a physician immediately.
SEE SECTION 5.

Physical Data

SECTION 1

Appearance: Colorless liquid.

Odor: Unpleasant rancid odor.

Solubility: Completely soluble in water.

Boiling Point: 162 C (324 F)

Vapor Density (Air=1): 3.04

Melting Point: -7 to -5 C (19-23 F)

Vapor Pressure (mm Hg): 0.43 @ 20 C

Specific Gravity: 0.964

Evaporation Rate: No information found.

NFPA Ratings: Health: 2 Flammability: 2 Reactivity: 0

Fire and Explosion

SECTION 2

Information

Fire:

Combustible liquid Flashpoint: 72 C (161 F).
(closed cup). Autoignition temperature: 440 C
(824 F). Flammable limits in air, % by volume:
lcl: 2; ucl: 10

Explosion:

Above flash point, vapor-air mixtures are
explosive within flammable limits noted above.

Fire Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Reactivity Data

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization: Will not occur.

Incompatibilities: Heat, flame, chromium trioxide, and oxidizing materials. The solution in water is acid, reacts with bases, and is corrosive.

Leak/Spill Disposal Information SECTION 4

Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Contain and recover liquid when possible. Collect as hazardous waste and atomize in a suitable RCRA approved combustion chamber, or absorb with vermiculite, dry sand, earth or similar material for disposal as hazardous waste in a RCRA approved facility. Do not flush to sewer! Reportable Quantity (RQ) (CWA/CERCLA) : 5000 lbs. Ensure compliance with local, state and federal regulations.

Health Hazard Information SECTION 5

A. Exposure/Health Effects

Inhalation: Vapors irritate the respiratory tract. Symptoms include sore throat, coughing and shortness of breath.

Ingestion: Corrosive. May cause tissue damage.

Skin Contact: Corrosive. Cause skin burns. May be absorbed through the skin.

Eye Contact: Corrosive. Vapors irritate the eyes. Splashes may cause eye damage.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

B. FIRST AID

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, call a physician immediately.

Skin Exposure: Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes.

Get medical attention if irritation develops or persists.

Eye Exposure: Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY (RTECS, 1986)

Oral rat LD50: 2940 mg/kg Mutation references cited.

Occupational Control Measures SECTION 6

Airborne Exposure Limits: None established.

Ventilation System: A local exhaust system which captures the contaminant at its source is recommended to prevent dispersion of the contaminant into the workroom air.

Personal Respirators (NIOSH Approved) For conditions of use where exposure to the vapor is apparent, a half mask chemical cartridge respirator may be worn. For emergencies, a self-contained breathing apparatus may be necessary.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

Storage and Special Information SECTION 7

Protect against physical damage. Outside or detached storage is preferred. Inside storage should be in a standard flammable liquids storage room or cabinet. Separate from oxidizing materials. Storage and use areas should be No Smoking areas.

Mallinckrodt provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. MALLINCKRODT MAKES NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MALLINCKRODT WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.

OR069

Addendum to Material Safety Data Sheet

REGULATORY STATUS

Hazard Categories for SARA
Section 311/312 Reporting

Acute	Chronic	Fire	Pressure	Reactive
-----	-----	-----	-----	-----
X		X		

Product or Components of Product:	SARA EHS		Chemicals		CERCLA	RCRA
	Sec. 302 RQ	TPQ	Name List	Chemical Category	Sec.103 RQ lbs	Sec. 261.33
n-BUTYRIC ACID (107-92-6)	No	No	No	No	No	No

SARA Section 302 EHS RQ:

Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

SARA Section 302 EHS TPQ:

Threshold Planning Quantity of Extremely Hazardous substance. An asterisk (*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

SARA Section 313 Chemicals:

Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

CERCLA Sec. 103:

Comprehensive Environmental Response, Compensation and Liability Act (Superfund) Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center, (800-424-8802); Listed at 40 CFR 302.4

RCRA:

Resource Conservation and Recovery Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.33

OR069

n-BUTYRIC ACID