

SAFETY DATA SHEET

Preparation Date: 8/8/2017

Revision Date: 08/03/2018

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: B1195
Product Name: N-BUTYRIC ACID, REAGENT

Other means of identification

Synonyms: Butanic acid
 Butanoic acid
 Buttersaeure (German)
 Ethylacetic acid
 Kyselina maselna (Czech)
 1-Propanecarboxylic acid
 Propylformic acid

CAS #: 107-92-6
RTECS # ES5425000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Flammable liquids	Category 4

Label elements

Danger

Hazard statements

Harmful if swallowed
Toxic in contact with skin
Causes severe skin burns and eye damage
Combustible liquid



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Harmful to aquatic life with long lasting effects

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. — No smoking

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
In case of fire: Use CO₂, dry chemical, or foam to extinguish.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
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n-Butyric Acid	107-92-6	100
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4. FIRST AID MEASURES

First aid measures

General Advice:	National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.
Skin Contact:	Wash off immediately with soap and plenty of water. Remove all contaminated clothes and shoes. Continue flushing with plenty of water for at least 15 minutes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.
Eye Contact:	Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.
Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms	Severe skin and eye irritation or burns Redness and burning sensation on skin May cause irritation of respiratory tract Coughing Dyspnea (Shortness of breath and difficulty breathing) Causes digestive (gastrointestinal) tract irritation May cause gastrointestinal (digestive) tract burns Abdominal pain Burning sensation in the mouth and stomach Sore throat
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Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:	Use water spray, mist, alcohol-resistant foam, Dry chemical or Carbon dioxide (CO ₂).
Unsuitable Extinguishing Media:	Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon Monoxide, Carbon Dioxide.

Specific hazards:

Combustible material. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. Contact with metals may evolve flammable hydrogen gas.

Special Protective Actions for Firefighters

Specific Methods:

For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Do not let this chemical enter the environment. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed. Keep in a well-ventilated place. Store at room temperature in the original container. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:

Metals
Aluminum
chromium trioxide
Strong oxidizing agents
Bases
Amines

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**National occupational exposure limits****United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
n-Butyric Acid	107-92-6	None	None	None	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
n-Butyric Acid	107-92-6	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
n-Butyric Acid	107-92-6	None	None

Appropriate engineering controls**Engineering measures to reduce exposure:**

Ensure adequate ventilation, especially in confined areas. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment**Personal Protective Equipment**

Eye protection:	Face-shield or Goggles
Skin and body protection:	Chemical resistant apron Gloves Long sleeved clothing
Respiratory protection:	Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES
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Physical state: Liquid	Appearance: Oily.	Color: Colorless.
Odor: Unpleasant. Rancid.	Taste Like butter fat.	Formula: C4H8O2
Molecular/Formula weight (g/mole): No information available	Flammability: Combustible	Flashpoint (°C/°F): 69-75 °C/156-167 °F
Flash Point Tested according to: Closed cup	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): 2%
Upper Explosion Limit (%): 10%	Melting point/range(°C/°F): -7.9 to -4.5 °C/17.8 to 23 °F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): 162-165 °C/323.6-329 °F	Bulk density: No information available	Density (g/cm3): 0.959
Specific gravity: No information available	pH: No information available	Vapor pressure @ 20°C (kPa): 0.00056 to 0.00112
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): log Pow = 0.79	Viscosity: No information available
Miscibility: Miscible with water Miscible with Ethanol	Solubility: Slightly soluble in Carbon Tetrachloride	

10. STABILITY AND REACTIVITY

Reactivity

Contact with metals may evolve flammable hydrogen gas

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Metals
Aluminum
chromium trioxide
Strong oxidizing agents
Bases
Amines

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Ingestion. Eyes. Inhalation.

Acute Toxicity

Component Information

n-Butyric Acid	
CAS-No.	107-92-6

LD50/oral/rat = 2 g/kg Oral LD50 Rat = 1500 mg/kg Oral LD50 Rat

LD50/oral/mouse = 1250 mg/kg

LD50/dermal/rabbit = 530 µL/kg Dermal LD50

LD50/dermal/rat = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 1500 mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 1250 mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = 530 mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:

Toxic in contact with skin. Contact causes severe skin irritation and possible burns. Symptoms may include moderate burning sensation, redness and scaling.

Eye Contact:

Severe eye irritation. Causes eye burns.

Inhalation

Can cause dyspnea (shortness of breath and difficulty breathing). Symptoms may include burning sensation, coughing and sore throat.

Ingestion Harmful if swallowed. Causes digestive (gastrointestinal) tract irritation. May cause digestive (gastrointestinal) tract burns. Symptoms may include a burning sensation in the mouth, throat, and stomach. Causes abdominal pain (epigastric distress).

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated exposure of eyes to vapor or mist may cause corneal damage. Prolonged or repeated inhalation may affect metabolism (weight loss). Prolonged or repeated ingestion may affect the liver. Prolonged or repeated inhalation may affect the blood (changes in serum composition).

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
n-Butyric Acid	107-92-6	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

*IARC (International Agency for Research on Cancer)
Group 3 - Not classifiable as to its carcinogenicity to humans
NTP (National Toxicology Program)*

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

n-Butyric Acid - 107-92-6

Freshwater Algae Data: 46.7 mg/L EC50 *Desmodesmus subspicatus* 72 h

Freshwater Fish Species Data: 200 mg/L LC50 *Lepomis macrochirus* 24 h 1

Water Flea Data: 61.7 mg/L EC50 *Daphnia magna* 24 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
n-Butyric Acid	107-92-6	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2820
Proper Shipping Name: Butyric acid
Hazard Class: 8
Subsidiary Class: No information available
Packing group: III
Emergency Response Guide Number: 153
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Special Provisions: IB3, T4, TP1
Symbol(s): No information available
Description: UN2820, Butyric acid, 8, III

TDG (Canada)

UN-No: UN2820
Proper Shipping Name: Butyric acid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant: No Information available
Description: UN2820, Butyric acid, 8, III

ADR

UN-No: UN2820
Proper Shipping Name: Butyric acid
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
Description: UN2820, Butyric acid, 8, III

IMO / IMDG

UN-No: UN2820
Proper Shipping Name: Butyric acid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III

Marine Pollutant No information available
EMS: F-A
Description UN2820, Butyric acid, 8, III

RID

UN-No: UN2820
Proper Shipping Name: Butyric acid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: UN2820, Butyric acid, 8, III

ICAO

UN-No: UN2820
Proper Shipping Name: Butyric acid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: UN2820, Butyric acid, 8, III

IATA

UN-No: UN2820
Proper Shipping Name: Butyric acid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 8L
Special Provisions No information available
Description: UN2820, Butyric acid, 8, III

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>n-Butyric Acid</i>	107-92-6	PresentACTIVE	Present KE-03838	Present	Present (2)-608	Present	Present	Present 203-532-3

U.S. Regulations

n-Butyric Acid

- Massachusetts RTK:** Present
- New Jersey RTK Hazardous Substance List:** 0300
- New Jersey - Discharge Prevention - List of Hazardous Substances:** Present
- Pennsylvania RTK:** Environmental hazard
- Pennsylvania RTK - Environmental Hazard List** Present
- New York Release Reporting - List of Hazardous Substances:**
5000 lb RQ
100 lb RQ
- Louisiana Reportable Quantity List for Pollutants:** Listed
- California Directors List of Hazardous Substances:** Present
- FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 182.60

FDA - 21 CFR - Total Food Additives 182.60

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
n-Butyric Acid	107-92-6	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
n-Butyric Acid	107-92-6	5000 lb final RQ 2270 kg final RQ	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
n-Butyric Acid	107-92-6	Not Applicable	Not Applicable

Canada**WHMIS 2015 - GHS Classifications**

WHMIS 2015 Hazard Classification Information:

Component
n-Butyric Acid
107-92-6 (100)

WHMIS 2015 Hazard Classification
Flammable liquids - Category 4: H227 Combustible liquid.;
Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Acute toxicity - Dermal - Category 3: H311 Toxic in contact with skin.; Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

The classification of this product has not been validated yet

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
n-Butyric Acid	1 %

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
n-Butyric Acid	107-92-6	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
n-Butyric Acid	107-92-6	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject

Product code: B1195

Product name: N-BUTYRIC ACID,
REAGENT

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		to Mandatory Reporting
n-Butyric Acid	107-92-6	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
n-Butyric Acid	107-92-6	Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage.607-135-00-X

EU - CLP (1272/2008)

R-phrase(s)

R34 - Causes burns.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 - Wear suitable protective clothing.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 1/2 - Keep locked up and out of the reach of children.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
n-Butyric Acid	107-92-6	C; R34	No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

C - Corrosive.



16. OTHER INFORMATION

Preparation Date: 8/8/2017
Revision Date: 08/03/2018
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on

technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet