Safety Data Sheet n-BUTYRIC ACID

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SECTION 1: Identification

GHS Product identifier

Product name	n-BUTYRIC ACID

Other means of identification

Product	Product Code
n-Butanoic acid n-BUTYRIC ACID LR Ethylacetic acid Propylformic acid	BL008

Recommended use of the chemical and restrictions on use

Synthesis of butyrate ester perfume and flavor ingredients, synthesis of esters in the production of enamels, pharmaceuticals, deliming agent, disinfectants, emulsifiers, sweetening gasoline and laboratory reagent.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1B

GHS label elements, including precautionary statements

Pictograms

Signal word	**Danger**

Hazard statement(s)

H314	Causes severe skin burns and eye damage

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
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 [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physcian
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 88.11

Components

Component	CAS no.	Concentration
BUTYRIC ACID (EC no.: 203-532-3; Index no.: 607-135-00-X)	**107-92-6**	**100 % (weight)**
CLASSIFICATIONS: Skin corrosion/irritation, Cat. 1B. HAZARDS: H314 - Causes severe skin burns and eye damage.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain and drench facilities in work area. If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 13 1126 from anywhere in Australia.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately medical attention is required.

In case of skin contact	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary
For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Small fire: Use dry chemical, CO2 or water spray. If safe to do so, move undamaged containers from fire area.
Large fire: Use dry chemical, CO2, foam or water spray - Do not use water jets.
Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside containers.

Specific hazards arising from the chemical
Hazards from Combustion Products: Oxides of carbon.
May burn but do not ignite readily. Containers may explode when heated. When heated, vapours may form explosive mixtures with air. Contact with metals may evolve flammable hydrogen gas. Runoff may pollute waterways. Fire will produce irritating, poisonous and/or corrosive gases.

Special protective actions for fire-fighters
Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid inhalation, contact with skin, eyes and clothing. Evacuate the area of all non-essential personnel.
Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up
ELIMINATE all ignition sources (no smoking, flares, sparks or flames) within at least 15m.
Do not touch or walk through spilled material.
Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
Cover with plastic sheet to prevent spreading.
Absorb with earth, sand or other non-combustible material and transfer to container.
DO NOT GET WATER INSIDE CONTAINERS.
SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

SECTION 7: Handling and storage

Precautions for safe handling
Avoid generating and inhaling mist/vapour.

Conditions for safe storage, including any incompatibilities
Corrosiveness: Corrosive to metals such as iron, steel, brass, aluminum and lead.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls
Not normally required. Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection
Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Body protection
Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Colourless liquid.
Color	No data available.
Odor	Penetrating and obnoxious odour.
Odor threshold	1 ppb - detection; 20 ppb - recognition
Melting point/freezing point	-8.0 to -5 °C
Boiling point or initial boiling point and boiling range	163.5 °C @ 757 mm Hg 75 °C @ 25 mm Hg
Flammability	Combustible
Lower and upper explosion limit/flammability limit	Flammable Limits - Lower: 2.35 vol% Flammable Limits - Upper: 12.3 vol%
Flash point	69 °C

Explosive properties	No data available.
Auto-ignition temperature	452 °C
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	2.5 (100 g/l, H2O, 20 °C)
Kinematic viscosity	Viscosity: 1.6 mPa*s
Solubility	Solubility in Water: Miscible. Solubility in Organic Solvents: Miscible in alcohol and ether.
Partition coefficient n-octanol/water (log value)	log P(o/w): 0.79 (experimentally)
Vapor pressure	0.84 mm Hg @ 20 °C
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 0.9583
Relative vapor density	3
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
No data available.

Further safety characteristics (supplemental)
Other Information: Refractive index: 1.3981 @ 20 °C

SECTION 10: Stability and reactivity

Reactivity
Stable under normal conditions of storage and handling.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Vigorous reaction may occur with bases yielding heat and pressure. May react violently or explosively with oxidising agents. May react violently or explosively with reactive metals and produce flammable hydrogen gas.

Hazardous Polymerization: Will not occur.

Conditions to avoid
Exposure to moisture. Heat, flames, ignition sources and incompatibles.

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials
Oxidising materials and strong bases.

Hazardous decomposition products
Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Acute Toxicity - Oral: LD50 (rat): 1500 mg/kg.

Ingestion: Causes burns. Symptoms may include sore throat, abdominal pain, nausea and vomiting. Risk of perforation in the oesophagus and stomach.

Inhalation: Irritating to respiratory system. Symptoms may include nasal irritation, sore throat, coughing and hoarseness. Extreme exposures may cause breathing difficulties and lung edema.

Skin corrosion/irritation
Harmful by skin contact. Direct contact can cause irritation, redness and pain. Longer exposure may cause burns, blistering and tissue destruction.

Serious eye damage/irritation
Contact with vapour or dilute solutions can cause redness, pain and blurred vision. Contact with concentrated solutions can cause corneal burns. Damage may be permanent.

Respiratory or skin sensitization
Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity
Germ cell mutagenicity: Not classified based on available information.

Mutagenicity: Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

Specific target organ toxicity (STOT) - single exposure
Not classified based on available information.

Specific target organ toxicity (STOT) - repeated exposure
Not classified based on available information.

Aspiration hazard
Not classified based on available information.

Additional information
Chronic Effects: Repeated or prolonged skin contact may cause chronic dermatitis.

SECTION 12: Ecological information

Toxicity
Short Summary of Assessment of Environmental Impact: No ecological problems are to be expected when the product is handled and used with due care and attention.

Persistence and degradability
Biodegradation: >95%/5 d (modified Zahn-Wellens-test).
Easily eliminable.

Bioaccumulative potential
Distribution: log P(o/w): 0.79 (experimental).

No bioaccumulation in to be expected (log P(o/w)<1)

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Sewage disposal
Distribution: log P(o/w): 0.79 (experimental).
No bioaccumulation in to be expected (log P(o/w)<1)

Other disposal recommendations
Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)
UN Number: 2820
Class: 8
Packing Group: III
Proper Shipping Name: BUTYRIC ACID

Hazchem emergency action code (EAC)
2X

IMDG
UN Number: 2820
Class: 8
Packing Group: III
EMS Number:
Proper Shipping Name: BUTYRIC ACID

IATA
UN Number: 2820
Class: 8
Packing Group: III
Proper Shipping Name: BUTYRIC ACID

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP
Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer
ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended.

Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.
Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019
Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au
IATA, Dangerous Goods Regulations (DGR)
IMO, International Maritime Dangerous Goods Code (IMDG)