

Safety Data Sheet

HEALTH	2
FLAMMABILITY	2
REACTIVITY	0

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name	Butyl-3-hydroxybutyrate, Natural
Product Number	N/A
CAS-No.	53605-94-0

1.2 Product Recommended Use

Flavorings

1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992- USA
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Telephone	845-496-6065
Fax	845-496-6248

1.4 Emergency Telephone Number

1-800-535-5053
International - 1-352-323-3500 collect

Section 2: HAZARD(s) IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Eye irritation (Category 2A)
Inhalation irritant

2.2 GHS Label Elements, Including precautionary statements

Pictogram



Signal Statement
Hazard Statement(s)

Warning

H319	Causes serious eye irritation.
H332	Harmful if inhaled

Precautionary Statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection

Safety Data Sheet

P304+P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P305+351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/ attention.

P403 +P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container to an approved waste disposal plant

2.3 HNOC (Hazards not otherwise classified or not covered by GHS)

None

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Synonym Butan-1-yl-3-hydroxybutanoate; butyl-3-hydroxybutyrate

Formula $C_8H_{16}O_3$

Molecular Weight 160.21 g/mol

CAS-No 53605-94-0

Hazardous Components

Component	Classification	Concentration
Butyl-3-hydroxybutyrate	Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H226, H315, H319, H335	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Contact with skin: Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water.

Contact with eyes: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Clothing contamination: Remove contaminated clothing and wash before reuse.

4.2 Most important symptoms and effects both acute and delayed

Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed.

No data available

Section 5: FIREFIGHTING MEASURES

- 5.1 Extinguishing Media**
Suitable Extinguishing Media For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
- 5.2 Special hazards arising from the substance or mixture** Carbon oxides
- 5.3 Advice for fire fighters** Wear self contained breathing apparatus for firefighting if necessary.
- 5.4 Further information** Use water spray to cool unopened containers.

Section 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.
- 6.2 Environmental precautions** Prevent further leakage or spillage. Discharge into the environment must be avoided. Do not allow to enter drains or sewage system.
- 6.3 Methods and materials for containment and clean up** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).
- 6.4 Reference to other sections**
For disposal see section 13.

Section 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Ensure adequate ventilation. Wash thoroughly after handling.
For precautions see section 2.2.
- 7.2 Conditions for Safe storage** Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- 7.3 Specific End use(s)** Flavorings

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters**
Contains no substances with occupational exposure limit values
- 8.2 Exposure Controls**
Appropriate Engineering Controls Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the workday.

Safety Data Sheet

Personal protective equipment

These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situations of anticipated use by our customers. They should not be construed as offering an approval or any specific use scenario.

Eye/face protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 56 min Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body protection	Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a	Appearance	Form: liquid Color: colorless
b	Odor	No data available
c	Odor Threshold	No data available
d	pH	No data available
e	Melting Point /Freezing Point	No data available
f	Initial boiling point and boiling range	~218 °C
g	Flash Point	~95°C closed cup

Safety Data Sheet

h	Evaporation Rate	No data available
i	Flammability (Solid, Gas)	No data available
j	Upper/lower Flammability Limit	No data available
k	Vapor pressure	No data available
l	Vapor density	No data available
m	Relative density @25°C	0.971
n	Solubility	No data available
o	Partition coefficient: n-octanol/water	No data available
p	Auto-ignition Temp.	303°C
q	Decomposition Temp,	354°C
r	Viscosity	No data available
s	Explosive properties	No data available
t	Oxidizing properties	No data available

9.2 Other Safety Information No data available

Section 10: STABILITY AND REACTIVITY

10.1 Reactivity	No data available
10.2 Chemical Stability	Stable under recommended storage conditions
10.3 Possibility of Hazardous reactions	No data available
10.4 Conditions to avoid	No data available
10.5 Incompatible materials	No data available
10.6 Hazardous decomposition products	No data available
10.7 Further Information	No data available

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute Toxicity

Safety Data Sheet

LD50-Oral (Rat)	
LC50-Inhalation (Rat)	>5.11 mg/l
LD50-Dermal (Rat)	>5,000 mg/kg
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	Causes serious irritation
Respiratory or skin sensitization	No data available
Germ Cell mutagenicity	No data available
Carcinogenicity	
	IARC No component of this product, present levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
	ACGIH No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
	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.
	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	No data available
Teratogenicity	No data available
Specific target organ toxicity-single exposure (GHS)	No data available
Specific target organ toxicity-repeated exposures (GHS)	No data available
Aspiration Hazards	No data available
Signs and Symptoms of Exposure	Gastrointestinal disturbance, Nausea, Headache, Vomiting
	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
Synergistic effects	No data available
RTECS:	Not available

Section 12: ECOLOGICAL INFORMATION

12.1	Toxicity	No data available
12.2	Persistence and degradability	No data available
12.3	Bioaccumulative potential	No data available
12.4	Mobility in soil	No data available
12.5	Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required / not conducted
12.6	Other adverse effects	No data available

Safety Data Sheet

Section 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product:	According to local regulations
Packaging	According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US)	Not a dangerous goods
IMDG	Not a dangerous goods
IATA	Not a dangerous goods

Section 15: REGULATORY INFORMATION

SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA 313 Components	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards	Acute health hazard.
Massachusetts Right to Know components	No components are subject to the Massachusetts Right to Know Act
Pennsylvania Right to Know components	No components are subject to the Pennsylvania Right to Know Act
New Jersey Right to Know components	No components are subject to the New Jersey Right to Know Act:
California Prop. 65 components	This product does not contain any chemical known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: OTHER INFORMATION

HMIS Rating

Health hazard	2
Chronic Health Hazard*	
Flammability	2
Physical Hazard	0

Further Information

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set

Safety Data Sheet

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