

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

Section 1: IDENTIFICATION

Product Name: **Butyraldehyde (n-Butyraldehyde), Natural**
 Product Name: **0221900**
 Recommended Use: Flavorings

Manufacturer: Aurochemicals
 7 Nicoll Street
 Washingtonville, NY 10992 – USA
 845-496-6064
 845-496-6248 Fax

Emergency Telephone No.: 1-800-535-5053
 (International 1-352-323-3500 collect)

Section 2: HAZARD(s) IDENTIFICATION

OSHA Hazards Flammable Liquid, Irritant
 GHS Classification Flammable liquids (Category 2)
 Acute toxicity, Oral (Category 5)
 Acute toxicity, Inhalation (Category 5)
 Acute toxicity, Dermal (Category 5)
 Eye irritation (Category 2A)
 Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements:

Pictogram or written description 

Signal Word: Danger

Hazard Statement: H225 Highly flammable liquid and vapor
 H303+ May be harmful if swallowed or
 H313 In contact with skin
 H319 Causes serious eye irritation
 H333 May be harmful if inhaled
 H402 Harmful to aquatic life

Precautionary Statement P210 Keep away from heat/sparks/open flames/hot surfaces-No smoking
 P305+ IF IN EYES: Rinse cautiously with water for several minutes.
 P351+ Remove contact lenses if present and easy to do.
 P338 Continue rinsing

HMIS Classification Health Hazard 2

	Flammability	3
	Physical Hazards	0
Potential Health Effects	Inhalation	May be harmful if inhaled. Causes respiratory tract irritation
	Skin	May be harmful if absorbed through skin. Causes skin irritation
	Eyes	Causes eye irritation
	Ingestion	May be harmful if swallowed

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Component	Butyraldehyde
Common Name:	Butyraldehyde
Synonyms:	Butanal
CAS #	123-72-8
EC#	204-646-6
EC-Index No.	605-006-00-2
Molecular Formula	C ₄ H ₈ O

Section 4: FIRST AID MEASURES

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled	Move person to fresh air. Consult a physician.
In case of skin contact	Remove contaminated clothing, rinse area with cool water then wash with mild soap and warm water.
Ingestion:	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Clothing:	Wash contaminated clothing before re-use

Section 5: FIREFIGHTING MEASURES

Conditions of Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface-No smoking
Suitable Extinguishing Media Special Firefighting Procedures:	Use water spray, alcohol resistant foam, dry chemical or carbon dioxide Do not stay in danger zone without self contained breathing apparatus Prevent fire-fighting water from entering surface or ground water. Discharge into the environment must be avoided.
Special Risks	Highly Flammable. Vapors heavier than air. Forms explosive mixtures with air at ambient temperatures. Development of hazardous combustion gases or vapors in the event of fire.
Other Information	Cool container with water spray from a safe distance. Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water. Keep away from sources of ignition

Section 6: ACCIDENTAL RELEASE MEASURES

Person-related precautionary measures	Evacuate personnel to safe areas. Do not inhale vapors, mist, or gas. Beware of vapors
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accumulating to form explosive concentrations; Ensure supply of fresh air in enclosed rooms.

Wear respirator, safety glasses, chemical resistant gloves.

Environmental-protected measures

Do not allow to enter drains or sewage system or released into environment.

Procedures for cleaning / absorption
Ventilate area

With absorbent, sweep up and discard in container, set out for disposal.
After sweep up, wash area and ventilate area well

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid inhalation of vapor and mist.
Use explosion proof equipment when handling this product.

Keep away from sources of ignition-No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for Safe Storage

Store tightly closed, in well ventilated place – no smoking. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Stench.

Dry residue is explosive.

Store under inert gas.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:			Components with workplace control parameters	
Component	CAS-No.	Value	Control Parameters	Basis
Butyraldehyde	123-72-8	TWA	25 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

Personal Protective Equipment:

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

Protective clothing should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory Protection:

Required when vapors / aerosols are generated

Eye Protection:

Wear eye and face protection – Face Shield

Hand Protection:

Wear chemically resistant gloves

Industrial Hygiene:

Handle in accordance with good industrial hygiene and safety practice. Wash contaminated clothing before reuse. Wash hands after working with product.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Colorless
Odor:	Characteristic Pungent odor
Boiling Point:	75°C
Flashpoint:	-11.1°C
Melting Point:	N/a
Ignition temperature	190°C
Oxidizing Properties:	Not oxidizing; Flammable
Lower Explosion Limit	1.8 vol%
Upper Explosion Limit	8 vol%
Vapor Pressure:	120 hPa (90mmHg) at 20°C
Specific Gravity @ 25°C:	0.800-0.835
Solubility	1:27 in water

Section 10: STABILITY AND REACTIVITY

Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapors may form explosive mixture with air.
Conditions to avoid	Heat, Flames, Sparks and extremes of temperature and direct sunlight.
Materials to avoid	Oxidizing agents, Strong bases, Strong reducing agents, Strong acids.
Hazardous decomposition products	Formed under fire conditions – Carbon oxides.

Section 11: TOXICOLOGICAL INFORMATION

LD50, Oral Rat	2490 mg/kg
LC50 Inhalation –mouse	44,610 mg.m ³ 2 h
LD50 Dermal Rabbit	3560 mg/kg
Other information on acute toxicity	No data available
Skin corrosion/irritation	Rabbit: No skin irritation
Serious eye damage/eye irritation	Rabbit: Moderate eye irritation -24 h
Respiratory or skin sensitisation	No data available
Germ Cell mutagenicity	Positive results from mutagenicity tests in mammals. Evidence that the substance has potential to cause mutations to germ cells. Genotoxicity in vitro-Hamster – Ovary: Sister chromatid exchange Genotoxicity in vitro-Hamster-Lungs: Mutation in mammalian somatic cells Genotoxicity in vitro-Rat-Liver: Unscheduled DNA synthesis Genotoxicity in vitro-Mouse-Oral: Sperm Genotoxicity in vitro-Mouse-Intraperitoneal: Sperm
Carcinogenicity	IARC No components of this product, present at 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 exposure (GHS)	No data available
Aspiration hazard	No data available
Potential Health effects	
Inhalation	May be harmful if inhaled. Causes respiratory irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation
Eyes	Causes eye irritation
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
Synergistic effects	No data available
RTECS:	ES2275000

Section 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50-Pimephales promelas (fathead minnow) 25.8 mg/l -96 h
Toxicity to daphnia and other aquatic invertebrates	EC50-Daphnia magna (water flea) 195mg/l -24 h
Persistence and degradability	Biodegradability
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. Harmful to aquatic life.

Section 13: DISPOSAL CONSIDERATIONS

Product:	According to local regulations
Packaging:	According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US)	UN1129 Class 3 Packing Group II
Proper Shipping Name	Butyraldehyde
Reportable Quantity (RQ)	
Marine Pollutant	No
Poison Inhalation Hazard	No
IMDG	UN1129 Class 3 Packing Group II
Proper Shipping Name	BUTYRALDEHYDE
Marine Pollutant	No
	EMS-No. F-E, S-D

IATA

UN1129 Class 3 Packing Group II
Butyraldehyde

Section 15: REGULATORY INFORMATION

OSHA Hazards	Flammable liquid, irritant		
SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302		
SARA 313 Components	The following components are subject to the reporting levels established by SARA Title III, Section 313:		
	Butyraldehyde	CAS # 123-72-8	Rev. Date: 4/24/1993
SARA 311/312 Hazards	Fire Hazard, Acute Health Hazard		
Massachusetts Right to Know Components	Butyraldehyde	CAS # 123-72-8	Rev. Date: 4/24/1993
Pennsylvania Right to Know Components	Butyraldehyde	CAS # 123-72-8	Rev. Date: 4/24/1993
New Jersey Right to Know Components	Butyraldehyde	CAS # 123-72-8	Rev. Date: 4/24/1993
California Prop. 65 Components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.		

Section 16: OTHER 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 forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

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