

SAFETY DATA SHEET

1-BUTANOL

SECTION 1: CHEMICAL AND COMPANY IDENTIFICATION

BioShop Canada Inc.
5480 Mainway
Burlington, Ontario L7L 6A4
1-800-234-1179

Emergency Telephone No.: 1-905-466-3832

Chemical Name: 1-BUTANOL

Catalog Number: BTU001

SECTION 2 HAZARDS IDENTIFICATION

GHS Classification:

Flammable liquids, Category 3
Acute toxicity, Oral, Category 4
Skin irritation, Category 2
Serious eye damage, Category 1
Specific target organ toxicity - single exposure, Category 3, Respiratory system, Central nervous system.

Pictogram:



Signal word: DANGER

Hazard Statements:

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary Statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P243 Take action to prevent static discharges.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 + P310 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/doctor.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.

Potential Health Effects

EMERGENCY OVERVIEW: WARNING. FLAMMABLE LIQUID AND VAPOR. MAY BE HARMFUL IF SWALLOWED, ABSORBED OR INHALED.

Effects of Acute Exposure:

Routes of entry: Eyes, skin, inhalation, Ingestion.
Target Organs: Central Nervous System, eyes, skin, respiratory system
Eyes: Causes severe irritation, redness and corneal injury. Vapors cause blurred vision. May cause corneal .
Skin: Causes skin irritation. Slightly absorbed through skin. Allergic reactions possible.
Ingestion: May be fatal if swallowed. May cause blindness. May cause CNS depression., nausea, coma and death.
Inhalation: Causes respiratory tract irritation. Same effects as with ingestion. May be absorbed through lungs.
CHRONIC HEALTH HAZARDS; May cause dermatitis. Prolonged and chronic exposure produces same effects as for ingestion and inhalation.

SECTION 3 COMPOSITION/ INGREDIENTS

	CAS #	%
1-BUTANOL	71-36-3	>99.5

Molecular Formula: C₄H₁₀O

Molecular Weight: 74.12

SECTION 4 FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes. GET MEDICAL AID
Skin: Flush area immediately with plenty of soap and water while removing contaminated clothing and shoes..
Inhalation: Remove victim to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen . GET MEDICAL ATTENTION.
Ingestion: Wash mouth with water. Do not induce vomiting . GET MEDICAL AID

SECTION 5 FIRE FIGHTING MEASURES

General Information: Always wear full protective gear in the event of a fire. Toxic gas and vapors may be generated by decomposition or combustion. Excessive dust in combination with air can create an explosive mixture.
Flammable: No
Flammable: yes
Flash Point: 35C
Autoignition temp: 343C
Extinguishing Media: use dry chemical, carbon dioxide, water spray.
Explosion Data: Lower: 1.4% Upper: 11.2%

SECTION 6 ACCIDENTAL RELEASE MEASURES

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Ventilate the area. Wear appropriate protective equipment. Sweep and place in a closed container. In the event of a fire always wear self-contained breathing apparatus, NIOSH/MSHA approved or equivalent.

Leak and Spill Procedures: Ventilate the area. Wear appropriate protective equipment. Cover with dry lime or soda. Sweep and place in a closed container. Avoid generating dust.

Environmental: should not be release into the environment

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact. Do not get in eyes, on skin, or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Minimize dust generation.

Storage Conditions: Room temperature. Store away from sources of ignition. Store away from heat source.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: NIOSH: 1400
100 ppm TWA: 300 mg/m³ TWA

Use adequate ventilation..

Wear appropriate protective equipment to prevent eye and skin exposure.

Wear appropriate respirator to prevent lung irritation.

Personal Protection: Lab coat, safety goggles, rubber gloves.

Ventilation: Local exhaust systems. Use fume hood

Respiratory protection: use OSHA/MSHA approved respirator.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance and Odor: Clear/colorless, wine like odor

Freezing/Melting Point: -89.5C

Viscosity: 2.27 mPas

Evaporation rate: 0.46

Boiling Point: 116° C

Specific Gravity: 0.810

Vapor pressure: 6.7 Hg

Vapor Density: 2.6 g/cm³

Water Solubility: Slightly Soluble

pH: N/A

SECTION 10 STABILITY AND REACTIVITY:

Stability: Stable under normal temperatures and pressure

Conditions to avoid: dust generation. Excess heat

Incompatibility: Strong oxidizing agents

Hazardous Decomposition Products: carbon monoxide, carbon dioxide,

Hazardous Polymerization: Will not occur

SECTION 11 TOXICOLOGICAL PROPERTIES

Toxicological Information:

Draize test, rabbit, eye: 2mg Severe

Oral, rabbit: LD50=3484 mg/kg

Oral, rat: LD50=790mg/kg

Oral, mouse: LD50=100 mg/kg

Epidemiology: No data available

Teratogenicity: Teratogenic effects have occurred in experimental animals

Reproductive Effects: Toxic effects have been seen in experimental animals

Neurotoxicity: Neurotoxic have been noted in animal studies.

Mutagenicity: Mutagenic effects have occurred in experimental animals

Carcinogenicity: Not listed by ACGIH, IARC, NTP, or OSHA. No known carcinogenic chemicals in this product.

SECTION 12 ECOLOGICAL INFORMATION

EC50 96 h>500mg/l freshwater algae

SECTION 13 DISPOSAL CONSIDERATION

Waste Disposal: Burn in chemical incinerator. Observe all Federal, provincial and local regulations.

SECTION 14 TRANSPORT INFORMATION

Shipping Information:

TDG (Canada)

UN number: 1120 Class: 3 Packing group: III

Proper shipping name: BUTANOLS

IMDG

UN number: 1120 Class: 3 Packing group: III EMS-No: F-E, S-D

Proper shipping name: BUTANOLS

IATA

UN number: 1120 Class: 3 Packing group: III

Proper shipping name: Butanols

SECTION 15 REGULATORY INFORMATION

US: TSCA: listed

European/International: Do not breathe dust.. Avoid contact with skin and dust.

SECTION 16 ADDITIONAL INFORMATION

Hazard Rating System (estimated)

NFPA	Health	Fire	Reactivity
	2	3	0

Prepared By: M.Kierdelewicz (President)

Date Prepared: Dec 29/2021

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The information provided on this Material Safety Data Sheet is furnished in good faith and without warranty of any kind. The above information is believed to be correct and should be used only as a guide. BioShop Canada Inc. shall not be held liable for any damage resulting from the handling or from the contact with the above product.

Observe all federal, provincial and state laws concerning health, safety and pollution.