

MALEIAL SAFETY DATA SHEET #983

SECTION I NAME

Product	n-BUTYL ALCOHOL
Chemical Synonyms	Normal Butanol
Formula	CH ₃ (CH ₂) ₃ OH
Unit(s) Size	100 ml to 20 liters
C.A.S. No.	71-36-3

3
1
0
CHEMTREC
800-424-9300
Day 716-226-6177
Night 716-334-4222

HAZARD RATING
LEAST SLIGHT MODERATE HIGH EXTREME
0 1 2 3 4

Health 2
Fire 3
Reactivity 1

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)	%	TLV Units
n-Butyl Alcohol	100%	See Section V

WARNING! FLAMMABLE-HARMFUL IF INHALED OR SWALLOWED-CAUSES SKIN AND EYE IRRITATION.

SECTION III PHYSICAL DATA

Melting Point (°F)	-89°C	Specific Gravity (H ₂ O = 1)	0.8108 at 20/20°C.
Boiling Point (°F)	117.5°C (242°F)	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	5.5 mm at 20°C.	Evaporation Rate (n-Butyl Acetate = 1)	0.459
Vapor Density (Air = 1)	2.55		
Solubility in Water	7.7% by weight.		

Appearance and Odor Clear, colorless liquid; characteristic, non-residual odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	97°F (36°C) TCC	Flammable Limits in Air % by Volume	Lower 1.73% Upper 129°F at 202°F
Extinguisher Media	Use carbon dioxide (CO ₂); dry chemical (ABC) for small fires; use alcohol foam for large fires.		

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH-approved self-contained breathing apparatus and protective clothing.

Ignition temperature: 650°F (343°C).

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products; can react vigorously with oxidizing materials.

D.O.T. FLAMMABLE LIQUID.



FREY SCIENTIFIC
905 HICKORY LANE MANSFIELD OHIO 44905

MSDS No.
Effective Date

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

Threshold Limited Value

TWA: 50 ppm (SKIN); 150 mg/m³ (ACGIH 1978)

Effects of Overexposure

INHALATION: Vapors cause irritation to upper respiratory tract. High vapor concentrations can produce headache, dizziness and drowsiness.
EYES: Contact with the liquid or vapor causes irritation. Prolonged and repeated exposure to the vapor may result in corneal injury.
SKIN: Prolonged and repeated contact causes drying and cracking of the skin.

Emergency and First Aid Procedures

IF INHALED: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
IN CASE OF CONTACT: Immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, get medical attention.
INGESTION: If swallowed, if conscious, give one or two glasses of water. Induce vomiting and call a physician.

SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid
Stable	x	Excessive temperature and heat.

Incompatibility (Materials to avoid)

Strong mineral acids, strong oxidizers.

Hazardous Decomposition Products

Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.

Hazardous Polymerization

May Occur Will Not Occur

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Eliminate all sources of ignition. Absorb in sand, earth or vermiculite. Carefully sweep up and remove. Flush spill area with water.

Waste Disposal Method

Dispose of in an approved incinerator or contract with a licensed waste disposal service.

SECTION VIII SPECIAL PROTECTION INFORMATION

Discharge, treatment, or disposal may be subject to federal, state, or local laws.

Respirator Protection Use an approved all purpose organic vapor canister mask for emergency clean up of spills.

Ventilation	Local Exhaust	Mechanical (General)	Recommended	Special	Other
			Recommended	No	No

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing
Keep away from heat, sparks, flame. Do not store in copper or its alloys. Wash thoroughly after handling.
Keep container tightly closed when not in use.

Other Precautions

Read label on container before using.
Avoid breathing vapors. Avoid contact with eyes, skin, clothing.
Use with adequate ventilation.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No.	No. 1	Date	1/28/87	Approved	W. J. W. W.	Chemical Safety Coordinator
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