FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 181.00

Revision Date: March 14, 2001

Section 1 — Chemical Product and Company Identification

n-Butyl Alcohol

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

n-Butyl Alcohol Synonym: 1-butanol CAS#: 71-36-3

Section 3 — Hazards Identification

Clear colorless liquid; wine-like odor.

Moderately toxic by inhalation or ingestion. Irritant to body tissue. Absorbed through the skin.

Avoid vapors. Flammable liquid. FLINN AT-A-GLANCE

Health-2 Flammability-3 Reactivity-1 Exposure-2 Storage-3

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid. Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.

Eye: Immediately flush with fresh water for 15 minutes.

External: Wash continuously with fresh water for 15 minutes.

Internal: Induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Class 1C-Flammable liquid. **NFPA CODE**

Flash Point: 95 F Upper: 11.2% Lower: 1.4% Autoignition Temperature: 649 F H-1 Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE F-3 and SCBA with full facepiece operated in positive pressure mode. R-0

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Remove all ignition sources and ventilate area. Contain spill with sand and absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor can. Store in a cool dry place. Use and dispense in a hood.

Section 8 — Exposure Controls, Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire). Exposure guidelines: TWA 100 ppm, (OSHA).

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Section 9 — Physical and Chemical Properties

Clear colorless liquid; vinous odor.

Solubility: Soluble in water (20%). Miscible with alcohol.

Formula: CH3(CH2)2CH2OH Formula Weight: 74.14 Specific Gravity: 0.81 Melting Point: -90 C Boiling Point: 117.7

Section 10 — Stability and Reactivity

Avoid contact with aluminum, chromium trioxide and oxidizing materials.

When heated to decomposition, it emits acrid smoke and fumes. Substance may develop explosive hydroperoxides.

Shelf life: Fair, substance may oxidize.

Section 11 — Toxicological Information

Acute effects: Severe irritant, gastrointestinal disturbances

Chronic effects: N.A.

Target organs: Central nervous system, ears, liver, kidneys, blood

ORL-RAT LD50: 790 mg/kg IHL-RAT LC50: 8000 ppm/4H SKN-RBT LD50: 3400 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations. Flinn Suggested Disposal Method 18b is one option.

Section 14 — Transport Information

Shipping Name: Butanols

Hazard Class: 3, Flammable Liquid

UN Number: UN1120 N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (200-751-6), RCRA code U031.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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Questions on Chemical Disposal or Storage?--Call Flinn

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