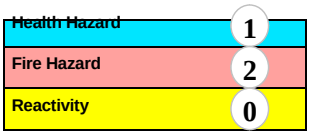
GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment
		
		See Section 15.

Section 1. Chemical Product and Company Identification

Common Name/ Trade Name	**2-Methyl -1-butanol**
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248
Commercial Name(s)	Not available.
Synonym	DL-2-Methyl-1-butanol; (+-)-2-Methyl-1-butanol; 2-Methylbutanol-1; 2-Methylbutanol; Active Amyl alcohol; Active primary Amyl alcohol; dl-sec-Butyl carbinol; sec-Butylcarbinol
Chemical Name	1-Butanol, 2-methyl-
Chemical Family	Not available.
Chemical Formula	C5-H12-O
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248

Catalog Number(s).	M2123
CAS#	132-37-6
RTECS	EL5250000
TSCA	TSCA 8(b) inventory: 2-Methyl -1-butanol
CI#	Not available.

IN CASE OF EMERGENCY
CHEMTREC (24hr) 800-424-9300

CALL (310) 516-8000

Section 2.Composition and Information on Ingredients

		Exposure Limits			
Name	**CAS #**	**TWA (mg/m³)**	**STEL (mg/m³)**	**CEIL (mg/m³)**	**% by Weight**
1) {2-}Methyl -1-butanol	132-37-6				100

Toxicological Data on Ingredients

2-Methyl -1-butanol:
DERMAL (LD50): Acute: 2889 mg/kg [Rabbit].

Section 3. Hazards Identification

Potential Acute Health Effects

Hazardous in case of eye contact (irritant), of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant), of ingestion, .

Potential Chronic Health Effects

CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.

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Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.
Serious Skin Contact	Not available.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Flammable.
Auto-Ignition Temperature	340°C (644°F) - 385 C.
Flash Points	CLOSED CUP: 43°C (109.4°F). OPEN CUP: 50°C (122°F) .
Flammable Limits	LOWER: 1.1%- 1.2% UPPER: 9.3% - 10.3%
Products of Combustion	These products are carbon oxides (CO, CO2).
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames and sparks, of heat.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Flammable liquid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
Large Spill	Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed.

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Section 7. Handling and Storage

Precautions	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with eyes. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.
Storage	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Personal Protection	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	**Odor**	Not available.
Molecular Weight	88.15g/mole	**Taste**	Not available.
pH (1% soln/water)	Not available.	**Color**	Colorless.
Boiling Point	128℃ (262.4℉) - 130 C.		
Melting Point	-70℃ (-94℉)		
Critical Temperature	Not available.		
Specific Gravity	0.816 (Water = 1)		
Vapor Pressure	0.4 kPa (@ 25℃)		
Vapor Density	3 (Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	The product is more soluble in oil; log(oil/water) = 1.3		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water, acetone.		
Solubility	Soluble in acetone. Solubility in Water: 30,000 mg/l @ 25 deg. C. Miscible with alcohol and ether		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Heat, ignition sources (sparks, flam, static), incompatible materials
Incompatibility with various substances	Reactive with oxidizing agents.
Corrosivity	Not available.

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Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation.
Toxicity to Animals	Acute dermal toxicity (LD50): 2889 mg/kg [Rabbit].
Chronic Effects on Humans	Not available.
Other Toxic Effects on Humans	Hazardous in case of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant), of ingestion.
Special Remarks on Toxicity to Animals	Lethal Dose/Conc 50% Kill: LD50[Rabbit] - Route: Skin; Dose: 3540 ul/kg LD50[Rat] - Route: Oral; Dose: 4.92 ml/kg
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Slightly irritating to the skin. It can be absorbed through the skin. Eyes: Moderately to severely irritating to the eyes. It may cause corneal injury. Inhalation: May cause respiratory tract irritation. Inhalation of vapors may cause dizziness, suffocation. Ingestion: Low single dose oral toxicity. May cause nausea, vomiting, diarrhea. May affect behavior/central nervous system/peripheral nervous system (somnolence, spastic paralysis with or without sensory change).

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification	CLASS 3: Flammable liquid.
Identification	UNNA: 1105 : Pentanol PG: III
Special Provisions for Transport	Not available.
DOT (Pictograms)	

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Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

Pennsylvania RTK: 2-Methyl -1-butanol
Massachusetts RTK: 2-Methyl -1-butanol
Massachusetts spill list: 2-Methyl -1-butanol
TSCA 8(b) inventory: 2-Methyl -1-butanol
FDA: Everything Added to Food in the United States (EAFUS): Listed as 2-Methyl-1-Butanol
FEMA: Generally Recognized as Safe: Listed as 2-Methyl-N-Butanol

California Proposition 65 Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 2205-289-9).
Canada: Listed on Canadian Domestic Substance List (DSL).
China: Listed on National Inventory.
Japan: Listed on National Inventory (ENCS).
Korea: Listed on National Inventory (KECI).
Philippines: Listed on National Inventory (PICCS).

Other Classifications

WHMIS (Canada)

WHMIS is not yet available. However, it might be classified as CLASS B-3: Combustible liquid with a flash point between 37.8℃ (100℉) and 93.3℃ (200℉). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC)

R10- Flammable.
R20- Harmful by inhalation.
R36/37- Irritating to eyes and respiratory system.

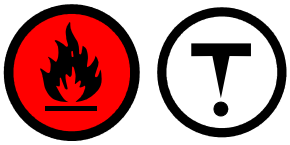
S16- Keep away from sources of ignition - No smoking.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37- Wear suitable gloves.

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	2
Reactivity	0
Personal Protection	h

National Fire Protection Association (U.S.A.)

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

ADR (Europe) (Pictograms)

Protective Equipment

Gloves.

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Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16. Other Information

MSDS Code	**M2236**
References	Not available.
Other Special Considerations	Major Uses: Solvent; organic synthesis (introduction of active amyl group); in lubricants, plasticizers, additives for oils and paints; chemical intermediate for esters and ethers; frothing agent in ore floation; chemical intermediate for Diamylditiophosphates (corrosion inhibitor); chemical intermediate for 2-Methyl-1-Butylamine

Validated by Sonia Owen on 9/1/2009.

Verified by Sonia Owen.

Printed 9/4/2009.

CALL (310) 516-8000

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