GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment
1 / 3 / 0	Health Hazard 3 Fire Hazard 1 Reactivity 0	See Section 15.

Section 1. Chemical Product and Company Identification

Common Name/ Trade Name	**Norepinerphrine Bitartrate, Monohydrate**	**Catalog Number(s).**	N3233, N3550
		CAS#	69815-49-2 or 108341-18-0; 51-40-1[anhydrous]
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	**RTECS**	DN6750000
		TSCA	TSCA 8(b) inventory: No products were found. Not listed on TSCA 8(b) inventory
Commercial Name(s)	Not available.	**CI#**	Not available.
Synonym	1,2-Benzenediol, 4-(2-amino-1-hydroxyethyl)-, (R)-, [R-(R*,R*)]-2.,3-dihydroxybutandioate (1:1) (salt), monohydrate; Arterenol, tartrate, monohydrate; L-Noradrenaline bitartrate monohydrate; Levarterenol bitartrate monohydrate; L-4-(2-Amino-1-hydroxyethyl)-1,2-benzenediol Bitartrate, monohydrate	**IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300**	
Chemical Name	1,2-Benzenediol, 4-[(1R)-2-amino-1-hydroxyethyl]-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt), monohydrate		
Chemical Family	Not available.	CALL (310) 516-8000	
Chemical Formula	C 8-H11-N-O3.C4-H6-O6.H2O		
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248		

Section 2.Composition and Information on Ingredients

		Exposure Limits			
Name	**CAS #**	**TWA (mg/m^3)**	**STEL (mg/m^3)**	**CEIL (mg/m^3)**	**% by Weight**
1) Norepinerphrine Bitartrate, Monohydrate	69815-49-2				100

Toxicological Data on Ingredients

For Epinerphrine Bitartrate (CAS no. 51-42-3):
ORAL (LD50): Acute: 4 mg/kg [Mouse].
Oral LD 50 information is not available for Norepinephrine Bitrate. The health hazard was exptrapolated from Epinephrine Bitartrate.

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Section 3. Hazards Identification

Potential Acute Health Effects	Very hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Severe over-exposure can result in death.
Potential Chronic Health Effects	**CARCINOGENIC EFFECTS**: Not available. **MUTAGENIC EFFECTS**: Not available. **TERATOGENIC EFFECTS**: Not available. **DEVELOPMENTAL TOXICITY**: Not available. The substance may be toxic to the nervous system, heart, cardiovascular system, Smooth muscle. Repeated or prolonged exposure to the substance can produce target organs damage.

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 if irritation occurs.
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	Not available.
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	May be combustible at high temperature.
Auto-Ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence 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	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

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Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

Precautions	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents, acids, alkalis.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Air Sensitive Sensitive to light. Store in light-resistant containers.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust 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	Solid.	**Odor**	Not available.
Molecular Weight	337.3 g/mole	**Taste**	Not available.
pH (1% soln/water)	Not available.	**Color**	Not available.

Boiling Point	Not available.
Melting Point	100°C (212°F)
Critical Temperature	Not available.
Specific Gravity	Not available.
Vapor Pressure	Not applicable.
Vapor Density	Not available.
Volatility	Not available.
Odor Threshold	Not available.
Water/Oil Dist. Coeff.	Not available.
Ionicity (in Water)	Not available.
Dispersion Properties	Not available.
Solubility	Not available.

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Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat, incompatible materials, light, air.
Incompatibility with various substances	Reactive with oxidizing agents, acids, alkalis.
Corrosivity	Not available.
Special Remarks on Reactivity	Air and light sensitive.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Inhalation. Ingestion.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	May cause damage to the following organs: the nervous system, heart, cardiovascular system, Smooth muscle.
Other Toxic Effects on Humans	Very hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: May cause eye irritation. Inhalation: Dust may cause respiratory tract irritation with coughing, wheezing, shortness of breath Ingestion: May be fatal if swallowed. May cause nausea, vomiting, sweating, photophobia. May affect behavior/central nervous system (headache, anxiety, dizziness, weakness, mental/mood changes, convulsions, excitement), respiration (respiratory difficulty, respiratory stimulation), cardiovascular system/heart (palpitations, hypertension, cardiac arrhythmias, fast or slow heartbeat). Medical Conditions Aggravated by Exposure: Mesenteric or peripheral thrombosis (blood clots); hypertension; dehydration; thyroid problems (especially hyperthyroidism); (taking monoamine oxidase inhibitors (MAO) or antidepressants of the triptyline or imipramine types; during Cyclopropane or halthane anesthesia.

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 product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

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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 6.1: Poisonous material.
Identification	: Toxic solid, organic (norepinephrine bitartrate monohydrate) UNNA: 2811 PG: II
Special Provisions for Transport	Not available.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations	No products were found.
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	EINECS: This product is not on the European Inventory of Existing Commercial Chemical Substances. Canada: Not listed on Canadian Domestic Substance List (DSL) or Canadian Non-Domestic Substances List (NDSL) China: Not isted on National Inventory. Japan: Not isted on National Inventory (ENCS). Korea: Not listed on National Inventory (KECI). Philippines: Not listed on National Inventory (PICCS). Australia: Not isted on AICS.
Other Classifications	**WHMIS (Canada)** CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). **DSCL (EEC)** R28- Very toxic if swallowed. S28- After contact with skin, wash immediately with plenty of [***] S36/37- Wear suitable protective clothing and gloves. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
HMIS (U.S.A.)	Health Hazard 3 Fire Hazard 1 Reactivity 0 Personal Protection E
National Fire Protection Association (U.S.A.)	Health; Flammability; Reactivity; Specific hazard
WHMIS (Canada) (Pictograms)	

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DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

ADR (Europe) (Pictograms)

Protective Equipment

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Safety glasses.

Section 16. Other Information

MSDS Code	**N0131**
References	Not available.
Other Special Considerations	Use: Medication for short-term control of low blood pressure

Validated by Sonia Owen on 7/20/2007.	**Verified by Sonia Owen.** **Printed 9/24/2007.**

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.