

MATERIAL SAFETY DATA SHEET



Conforms to 93/112/EC and ISO 11014-1

1. Chemical Product and Company Identification

Product Name: Riboflavin

Product Number: EC-501

Chemical Names/Description: Lactoflavine; Vitamin B2; Vitamin G; Isoalloxazine, 7,8-dimethyl-10-D-ribityl

Manufacturer
National Diagnostics
305 Patton Drive
Atlanta, GA 30336

Telephone Numbers
(800) 526-3867
(404) 699-2121

Emergency Numbers
Chemtrec
(800) 424-9300 (U.S. & Canada)
01-703-527-3887 (outside U.S. & Canada)

2. Composition/Information on Ingredients

Component	% Comp.	CAS #	EINECS #	TLV (Units)
RIBOFLAVIN	99	83-88-5	201-507-1	None Established

3. Hazards Identification

Appearance and Odor

Yellow to orange-yellow crystalline powder with a slight odor.

EMERGENCY OVERVIEW - IMMEDIATE HAZARD

No information found.

EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING:

No information found.

Potential Health Effects

Inhalation

May cause delayed pulmonary edema.

Ingestion

No information available.

Skin

May cause skin discoloration.

Eyes

May cause chemical conjunctivitis.

Signs and Symptoms of Overexposure

Inhalation

Causes respiratory tract irritation.

Ingestion

Ingestion of large amounts may cause gastrointestinal irritation.

Skin

Causes skin irritation.

Eyes

Causes eye irritation.

Carcinogenicity

Not listed as a known or anticipated carcinogen by ACGIH, NIOSH, OSHA, NTP or IARC.

Mutagenicity

Cytogenetic Analysis: Hamster, Lung = 300mg/L. ; Sex Chromosome Loss and Nondisjunction:

Hamster, Lung = mg/L.

Reproductive Toxicity

No information available.

Teratogenic Effects

No information available.

Routes of Entry

Ingestion and inhalation.

Target Organ Statement

No information available.

4. First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Flash Point	N.A.	Flammable Limits	N.A.
Flash Point Method	N.A.	Autoignition temperature	N.A.

Extinguishing media

Use media appropriate to the primary cause of fire.

Protective Equipment

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing

apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Hazardous Combustion Products

Highly toxic gases may be involved in fires of this product.

Unusual Fire and Explosion Hazards

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

NFPA Codes: Health 1 Flammability 1 Reactivity 0

6. Accidental Release Measures

Steps to be taken in case material is released or spilled

Use a vacuum cleaner equipped with charcoal exhaust scrubber or hose from mechanical exhaust ventilation system to vacuum spills. If this is not possible, sweep up spills and place in a covered waste disposal container. Flush area with water.

Waste Disposal Method

Disposal must be made in accordance with applicable federal, state, and local regulations.

Personal Precautions

Wear appropriate protective equipment as specified in section 8.

7. Handling and Storage

Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

Storage

Keep in a tightly closed container, stored in a cooled, dry, ventilated area. Protect from physical damage. Isolate from incompatible materials (section 10).

Storage Temperature

20C

Disposal

Observe all national, state, and local regulations regarding disposal.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits

Component: RIBOFLAVIN

ACGIH Threshold Limit Value (TLV): None Established

OSHA Permissible Exposure Limit (PEL): None Established

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborn Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection

Not expected to require personal respirator usage.

Eye Protection

Safety glasses.

Skin Protection

Wear protective gloves and clean body covering clothing.

Other Control Measures

9. Physical Properties

Boiling point	N.A.	Evaporation Rate	Negligible
Melting point	290C	Solubility in water	Soluble
Vapor pressure (mmHg)	Negligible	pH	6
Vapor density (Air = 1)	N.A.	Specific gravity (H2O = 1)	N.A.
% volatile by volume	N.A.		

10. Stability and Reactivity

Stability

Stable at room temperature in closed containers under normal storage and handling conditions. Light sensitive.

Conditions to Avoid

Incompatible materials, light, dust generation, moisture, excess heat.

Hazardous Decomposition Products

Nitrogen oxides, carbon monoxide, oxides of phosphorous, irritating.

Hazardous Polymerization

Will not occur

Incompatibles

RIBOFLAVIN:

Strong oxidizing agents, reducing agents, bases, calcium, metallic salts.

11. Toxicological Information

Product LD50 Values

Riboflavin	Oral Rat LD50 (mg/kg):	10000
Riboflavin	Dermal Rabbit LD50 (mg/kg):	

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
RIBOFLAVIN	No	No	None

12. Ecological Information

RIBOFLAVIN

No information available.

13. Disposal Considerations

Observe all national, state, and local regulations regarding disposal.

14. Transport Information

D.O.T.

Proper Shipping Name: Not regulated.

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

I.A.T.A.

Proper Shipping Name: Not regulated.

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

I.M.O.

Proper Shipping Name: Not regulated.

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

15. Regulatory Information

United States

TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
RIBOFLAVIN	N.A	N.A	N.A	N.A.	N.A

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

16. Other Information

NFPA Codes: Health 1 Flammability 1 Reactivity 0

MANUFACTURER DISCLAIMER: The information given herein is offered in good faith as accurate, but without guarantee. Conditions of the use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.