

MATERIAL SAFETY DATA SHEET

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MSDS No. 100 50
 Effective Date July 1, 1986

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product UREASE
Chemical Synonyms Urease (From Jack Bean Meal)
Formula Complex enzyme
Units/Size 10, 25 grams
C.A.S. No. 9002-13-5

HAZARD RATING

HEALTH	0
FLAMMABILITY	0
REACTIVITY	0

By 716-226-4377
 Reg. 716-334-4222

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)	%	TLV Units
Urease	100%	None established

Low hazard for usual laboratory handling; non-toxic.

SECTION III PHYSICAL DATA

Melting Point (°F)	Decomposes	Specific Gravity (d=1)	Less than 1
Boiling Point (°F)	Decomposes	Percent Volatile by Volume (%)	Non-volatile (NA)
Vapor Pressure (mm Hg)	Negligible as solid	Evaporation Rate	Non-volatile (NA)
Vapor Density (d=1)	Data not listed		
Solubility in Water	Insoluble		
Appearance and Odor	tan, heavy powder; no odor		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA)	Flammable Limit (LFL/UL/HL/SHL % by Volume)	None
Extinguisher	Water sprays; carbon dioxide (CO ₂); dry chemical (ABC).	Other	None

SPECIAL FIRE-FIGHTING PROCEDURES

In fire conditions, wear a NIOSH-approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce various hazardous hydrogen decomposition products, oxides of nitrogen (NO_x) and sulfur (SO_x); can react with strong oxidizing materials.

D.O.T. NON-REGULATED

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

SECTION V HEALTH HAZARD DATA

Threshold Limited Value
 None established by IARC (1973-81).
 100%: Inadvertent - at 100%: 60 mg/yr.

Effects of Overexposure
 This material is not a hazardous or toxic material. IRRITATION: Non-hazardous. EYES: No specific hazard is known, however, any material that contacts the eye may be irritating. SKIN: Low hazard. None expected. INGESTION: Low hazard. None expected.

Emergency and First Aid Procedures
 EYES: In case of contact, flush thoroughly with water. If irritation develops or persists, get medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid	Excessive temperature and heat.
	Stable		
Incompatibility (Materials to avoid)	Strong oxidizing materials.		

Hazardous Decomposition Products
 When heated to decomposition, emits toxic fumes of various hydrogen decomposition products, oxides of nitrogen (NO_x) and sulfur (SO_x); can react with strong oxidizing materials.

Hazardous Polymerization
 May Occur: Will Not Occur
 Conditions to Avoid: Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
 Sweep up and place in a suitable container for disposal in a sanitary landfill. Wash spill area with soap and water.

Waste Disposal Method
 Uncontaminated material may be disposed of in a sanitary landfill.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection	None needed in normal laboratory handling. In dusty conditions prevent contact with dust.
Ventilation	Local Exhaust: none needed Mechanical (General): none needed
Protective Gloves	None needed
Other Protective Equipment	Lab coat, eye wash station.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing
 Store in a cool, dry place away from strong oxidizing materials. Wash thoroughly after handling.

Other Precautions
 Read label on container before using.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.
Rev. No. 10/1 Date 11/86 Approved: *[Signature]* Chemical Safety Coordinator

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