

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-1; Flammability-1; Reactivity-0; Special- -	HMIS Rating: Health-1; Flammability-1; Reactivity-0; Personal Protection-B
Manufactured For: Hillyard Industries, Inc.	DOT Hazard Classification: ORM-D
Address: 302 N. 4 th Street	Identity (trade name as used on label):
Address: St. Joseph, MO 64501	LIQUID ENZYME II / Part # HIL0104754
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com	MSDS Number: A00171 Revision – 1
EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300	Date Prepared: 09/10/01 Prepared By: CH/IB
NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA	Information Calls: (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
Aliphatic Petroleum Distillates	8052-41-3	Yes	100	100	d
	64742-89-8	Yes	300	300	d
Methyl Alcohol	67-56-1	Yes	200	200	d
Propylene glycol phenyl ether	770-35-4	No	Not est.	Not est.	d
Isobutane/Propane blend	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: Concentrate Only= 100°C	Specific Gravity (H2O=1): Concentrate Only = 0.963
Vapor Pressure: PSIG @ 70°F (Aerosols): Max.70	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate (= 1): N/E
Solubility in Water: Soluble	Water Reactive: No
Appearance and Odor: Clear, straw colored microemulsion with floral fragrance.	

SECTION 3 – FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) NOT FLAMMABLE			Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A			EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water.	
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.				
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.				

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [] UNSTABLE	HAZARDOUS POLYMERIZATION [] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong acids or alkali compounds may inactivate biological cultures.	Conditions to Avoid: Open flame, welding arcs, heat.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.	

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [] INGESTION [X] SKIN ABSORPTION [X] EYE [] NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Excessive inhalation of vapors can be harmful and may cause allergic type response in susceptible or hypersensitive individuals.	
Eye Contact: Slight irritation.	Skin Contact: Redness and irritation.
Ingestion: Irritation of the mouth, pharynx, esophagus and stomach may develop.	
CHRONIC EFFECTS: Headache, dizziness, nausea, vomiting, gastrointestinal irritation, and possible unconsciousness if vapor concentration exceeds TLV.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. If irritated, seek medical attention.
Skin Contact: Remove contaminated clothing and footwear. Wash material off of skin with soap and water. Wash clothing and footwear before reuse. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Aspiration hazard. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH to be used in positive pressure mode.	
Protective Gloves: Disposable latex gloves suggested.	Eye Protection: Safety glasses recommended.
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.	

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Asorb with suitable medium. Place in closed drum for proper disposal. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use pose no disposal hazard.
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only