

Safety Data Sheet

VECTROL®

SECTION 1: PRODUCT AND COMPANY INFORMATION

Manufacturer	Biofeed Solutions, Inc., PO Box 3434, Glendale, AZ 85311		
Telephone	623-930-7510	Fax	623-930-8598
Product Name(s)	VECTROL®	Product ID #	Not Applicable
Chemical Family	Fungicide/Insecticide	CAS Number	Mixture
Emergency Contact / Number	623-930-7510		

SECTION 2: HAZARD IDENTIFICATION

Hazards Overview: A hazy to opaque, brownish, slightly acidic liquid having a unique characteristic odor. Exposure to this product's mists or liquid may cause severe irritation to the eyes and may cause irritation to the skin and respiratory tract. This product can be toxic upon ingestion. It may cause an allergic reaction to sensitive persons.

Classification: HAZARD CATEGORY 5 -MAY BE HARMFUL IF SWALLOWED
Signal Word: WARNING
Hazard Statement: H303 – WARNING – May be harmful if swallowed
Precautionary Statements P312; Call a poison center/doctor/physician if you feel unwell

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	OSHA HAZARD	WT %	ACGIH		OSHA	
				TLV _(TWA)	STEL	PEL _(TWA)	STEL
Thyme Oil	8007-46-3	Combustible Liquid; Eye, Skin & Respiratory Irritant; Moderately Toxic by Ingestion	10 ± 1	None	None	None	None
Glycerin	56-81-5	Mild Eye & Skin Irritant; Mild to Moderate Respiratory Irritant	1 ± 1	10 mg/m ³ (Mists)	None	Mist Total Mist=15 mg/m ³ Respirable Fraction=5 mg/m ³	None
Potassium Hydroxide	1310-58-3	Non combustible liquid; Eye, Skin & Respiratory Irritant; Moderately Toxic by Ingestion	2 ± 1	None	None	None	None

SECTION 4: FIRST AID MEASURES

INHALATION: If inhaled, immediately move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; use the Holger Nielsen method (back pressure-arm lift) or proper respiratory device. If breathing is difficult, give oxygen. Call a physician.

EYE CONTACT: In case of contact, immediately flush eyes with plenty of clean running water for at least 15 minutes, lifting the upper and lower lids occasionally. Remove contact lenses, if worn. Get medical attention immediately.

SKIN CONTACT: In case of contact, immediately flush skin with plenty of clean running water for at least 15 minutes, while removing contaminated clothing and shoes. If burn or irritation occurs, call a physician.

INGESTION: If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person.

NOTE TO PHYSICIANS: Aspiration hazard. Any of this product, aspirated during swallowing or vomiting, may cause lung injury If ingested. Consideration should be given to careful endoscopy as stomach or esophageal irritation may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Treat exposure symptomatically.

Safety Data Sheet

VECTROL®

SECTION 5: FIREFIGHTING MEASURES

Flashpoint and Method: This product does not flash.
Flammable Limits (in air, % by volume) **Lower:** Not applicable **Upper:** Not applicable
Autoignition Temperature: Not applicable

GENERAL HAZARD: This product is an aqueous solution of inorganic salts, a polyol and natural plant oils. The Uniform Fire Code health hazard classification for this product is: **Irritant**. This product may produce hazardous mists or hazardous decomposition products.

FIRE FIGHTING INSTRUCTIONS: **EXTINGUISHING MEDIA:** Water, foam, CO2 or dry chemicals. Use a water spray or fog to cool the containers exposed to the heat of a fire.

FIRE FIGHTING EQUIPMENT: Fire fighters should wear full protective equipment, including self-contained breathing apparatus.

HAZARDOUS COMBUSTION PRODUCTS: When heated to dryness and decomposition, it emits carbon monoxide, carbon dioxide and trace amounts of potassium and sodium, along with dense, irritating smoke.

SECTION 6: ACCIDENTAL RELEASE MEASURES

RELEASE TO LAND: Wearing recommended protective equipment and clothing, dike the spill and pick up the bulk of liquid using pumps or a vacuum truck, or absorb the liquid in sand or a commercially absorbent material. Place in approved containers for recovery, disposal, or satellite accumulation. Neutralize the acidity, of the remaining liquid, using soda ash, lime, or other agent appropriate for neutralizing acidic liquids. Flush the spill area with water; collect the rinse water for disposal or sewer, as appropriate.

RELEASE TO WATER: Wear recommended protective equipment and clothing if contact with hazardous material can occur. Stop or divert water flow. Dike contaminated water and remove for disposal and/or treatment. As appropriate, notify all downstream users of possible contamination.

SECTION 7: HANDLING AND STORAGE

STORAGE TEMPERATURE: Ambient **STORAGE PRESSURE:** Ambient

GENERAL: Store in a cool, dry, well-ventilated area, away from incompatible materials and products. Protect eyes, skin and clothing from contact with product. Wear recommended personal protective equipment when handling this product. Avoid breathing vapors or mists. Use with adequate ventilation. Do not take internally. Keep the container tightly closed when not in use. Wash thoroughly after handling this product.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

CONTROL MEASURES: Use a local or general, mechanical exhaust ventilation system capable of maintaining emissions, in the work area, below the ACGIH-TLV, OSHA-PEL or levels that may cause irritation.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

RESPIRATOR: For exposure above the ACGIH-TLV, OSHA-PEL or levels that may cause irritation, wear a NIOSH-approved full facepiece or half mask air-purifying cartridge respirator equipped with a good mist / particulate filter cartridge or supplied air. **Note:** Always consult the respirator manufacturer's data when determining the suitability of respiratory protective devices prior to use.

EYES: Wear chemical goggles (recommended by ANSI Z87.1-1979), unless a full face respirator is worn. **Note:** Always consult the protective eyewear manufacturer's data when determining the suitability of protective eyewear prior to use.

GLOVES: Wear Neoprene, Nitrile, Butyl Rubber or Natural Rubber gloves. **Note:** Always consult the glove manufacturer's permeation data when determining the suitability of gloves prior to use.

CLOTHING & EQUIPMENT: Wear a Neoprene, Nitrile, Butyl Rubber or Natural Rubber apron when handling this product. An eye wash station and safety shower should be available in the work area. **Note:** Always consult the clothing/equipment manufacturer's permeation data when determining the suitability of clothing/equipment prior to use.

FOOTWEAR: Wear Neoprene, Nitrile, Butyl Rubber or Natural Rubber boots. **Note:** Always consult the footwear manufacturer's permeation data when determining the suitability of footwear prior to use.

Safety Data Sheet

VECTROL®

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State	Hazy to opaque, brownish	Flash Point	Not Applicable
Specific Gravity (Water=1)	1.044 – 1.89 @ 20°C	Upper Flammability Limits	Not Applicable
Evaporation Rate	Less than 1	Lower Flammability Limits	Not Applicable
pH	12.3	Auto-ignition Temperature	Not Applicable
Solubility in Water	100% Soluble	Decomposition Temperature	Not Determined
Odor	Perfumed Organic	Vapor Pressure	Not Determined
Odor Threshold	Not Determined	Vapor Density (Air=1)	Not Determined
Melting/Freezing Point	Not Applicable	Partition Coefficient (n-octanol/water)	Not Determined
Boiling Range	Not Applicable	Viscosity (@ 41 °C)	Not Determined
Initial Boiling Point	271 °F / 133 °C	Critical Temperature	Not Determined
Note: Physical and chemical properties are provided for safety, health and environmental considerations and do not fully represent product specifications. Those should be requested separately.			

SECTION 10: STABILITY AND REACTIVITY

GENERAL:	This product is stable and hazardous polymerization will not occur.
CONDITIONS TO AVOID:	Do not store this product below 50° F (10° C) or above 90° F (30° C)
INCOMPATIBLE MATERIAL:	Strong acids, cyanides, sulfides, sulfites, chlorine releasers and all oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS:	When heated to dryness and decomposition, it emits carbon monoxide, carbon dioxide and trace amounts of potassium and sodium, along with dense, irritating smoke.
SENSITIVITY TO MECHANICAL IMPACT:	This product is not sensitive to mechanical impact.
SENSITIVITY TO STATIC DISCHARGE:	This product is not sensitive to static discharge.

Safety Data Sheet

VECTROL®

SECTION 11: TOXICOLOGICAL INFORMATION

Components:	Thyme Oil	Clove
Eye Contact:	No data available	No data available
Skin Contact:	No data available	No data available
Oral Rat LD50:	No data available	No data available
Dermal Rabbit LD50:	No data available	No data available
Inhalation Rat LC50:	No data available	No data available
Human Data:	No data available	No data available
Other Toxicological Data:	No data available	No data available
Carcinogenicity:	No data available	No data available
Teratogenicity:	No data available	No data available
Mutagenicity:	No data available	No data available
Synergistic Products:	None reported	None reported
Target Organs:	Eyes, Skin, Mucous membranes & Lungs	Eyes, Skin, Mucous membranes & Lungs
Medical Conditions		
Aggravated By Exposure:	Skin or Respiratory disorders	Skin or Respiratory disorders
Components:	Glycerin	Potassium Hydroxide
Eye Contact:	Rabbit: 500 mg/24 hours; Mild	No data available
Skin Contact:	Rabbit: 500 mg/24 hours; Mild	No data available
Oral Rat LD50:	12,600 mg/kg	Greater than 1,000 mg/kg
Dermal Rabbit LD50:	Greater than 10 gm/kg	No data available
Inhalation Rat LC50:	Greater than 570 mg/m ³ /1 hour	No data available
Human Data:	Oral Human TDLo: 1,428 mg/kg; Headache, Gastrointestinal effects	No data available
Other Toxicological Data:	Oral Mouse LD50: 4,090 mg/kg	No data available
Carcinogenicity:	No data available	No data available
Teratogenicity:	Oral Rat TDL: 100 mg/kg (male 1 Day prior to mating) Effects on Fertility – Post-implantation mortality	No data available
Mutagenicity:	Human DNA Inhibition; Lymphocyte: 200 mmol/Liter	No data available
Synergistic Products:	None reported	None reported
Target Organs:	Eyes, Skin, Mucous membranes, Lungs & Kidneys	Eyes, Skin, Lungs
Medical Conditions		
Aggravated By Exposure:	Skin, Respiratory or Kidney disorders	Skin or Respiratory disorders
Components:	Proprietary Ingredient	
Eye Contact:	No data available	
Skin Contact:	No data available	
Oral Rat LD50:	No data available	
Dermal Rabbit LD50:	No data available	
Inhalation Rat LC50:	No data available	
Human Data:	No data available,	
Other Toxicological Data:	No data available	
Carcinogenicity:	No data available	
Teratogenicity:	No data available	
Mutagenicity:	No data available	
Synergistic Products:	None Reported	
Target Organs:	Eyes, Skin, Mucous membranes, Lungs	
Medical Conditions		
Aggravated By Exposure:	Skin, Respiratory disorders	

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	Not Applicable
Mobility	Not Determined
Degradability	Not Determined
Bioaccumulation	Not Determined

Safety Data Sheet

VECTROL®

SECTION 13: DISPOSAL CONSIDERATION

Triple rinse when empty for recycling. Always dispose of container in accordance with local, state, and/or federal regulations. Empty containers may contain residues.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name Not Regulated

SECTION 15: REGULATORY INFORMATION

COMPONENTS:	Thyme Oil	Clove Oil	Glycerin	Potassium Hydroxide
OSHA Target Organs:	Eyes, Skin, Mucous membranes & Lungs	Eyes, Skin, Mucous Membranes & Lungs	Eyes, Skin, Lungs & Liver	Eyes, Skin, Mucous Membranes & Lungs
Carcinogenic Potential:				
Regulated by OSHA:	No	No	No	No
Listed on NTP Report:	No	No	No	No
Listed by IARC:	No	No	No	No
IARC Group:	Not applicable	Not applicable	Not applicable	Not applicable
ACGIH Appendix A:	Not listed	Not listed	Not listed	Not listed
A1 Confirmed Human:	Not applicable	Not applicable	Not applicable	Not applicable
A2 Suspected Human:	Not applicable	Not applicable	Not applicable	Not applicable

U.S. EPA Requirements

Release Reporting

CERCLA (40 CFR 302)

Listed Substance:	Not listed	Not listed	Not listed	Not listed
Reportable Quantity:	Not applicable	Not applicable	Not applicable	Not applicable
Category:	Not applicable	Not applicable	Not applicable	Not applicable
RCRA Waste No.:	Not applicable	Not applicable	Not applicable	Not applicable
Unlisted Substance:	Yes	Not applicable	Not applicable	Not applicable
Reportable Quantity:	100 pounds	Not applicable	Not applicable	Not applicable
Characteristic:	Ignitibility	Not applicable	Not applicable	Not applicable
RCRA Waste No.:	Not listed	Not applicable	Not applicable	Not applicable

SARA TITLE III

Section 302 & 303 (40 CFR 355):

Listed Substance:	Not listed	Not listed	Not listed	Not listed
Reportable Quantity:	Not applicable	Not applicable	Not applicable	Not applicable
Planning Threshold:	Not applicable	Not applicable	Not applicable	Not applicable

Section 311 & 312 (40 CFR 370):

Hazard Categories (product):	Fire: N Sudden Release of Pressure: N Reactive: N Acute Health: Y Chronic Health: N			
Planning threshold:	10,000 pounds	10,000 pounds	10,000 pounds	10,000 pounds

Section 313 (40 CFR 372):

Listed Toxic Chemical:	Not listed	Not listed	Not listed	Yes (Aqua Ammonia)
Reporting Threshold:	Not applicable	Not applicable	Not applicable	10,000 pounds

U.S. TSCA Status

Listed (40 CFR 710):	Yes	Yes	Yes	Yes
-----------------------------	-----	-----	-----	-----

State Regulations

State of California: Safe Drinking Water and Toxins Enforcement Act, 1986 (Proposition 65):

Carcinogen:	No	No	No	No
Reproductive Toxin:	No	No	No	No

Other Regulations

State Right To Know Laws: MA, PA

Canadian Regulations

Product Information:

Controlled Product:	Yes
WHMIS Hazard Symbols:	Material Causing Other Toxic Effects
WHMIS Class & Division:	D.2B

Ingredient Information:

IDL Substance:	No	No	No	No
DSL or NDSL Lists:	DSL	DSL	DSL	DSL

Safety Data Sheet

VECTROL®

COMPONENTS:
OSHA Target Organs: **Proprietary Ingredient**
Eyes, Skin, Mucous
membranes & Lungs

Carcinogenic Potential:
Regulated by OSHA: No
Listed on NTP Report: No
Listed by IARC: No
IARC Group: Not applicable
ACGIH Appendix A: Not listed
A1 Confirmed Human: Not applicable
A2 Suspected Human: Not applicable

U.S. EPA Requirements

Release Reporting

CERCLA (40 CFR 302)

Listed Substance: Not listed
Reportable Quantity: Not applicable
Category: Not applicable
RCRA Waste No.: Not applicable

Unlisted Substance: Not applicable
Reportable Quantity: Not applicable
Characteristic: Not applicable
RCRA Waste No.: Not applicable

SARA TITLE III

Section 302 & 303 (40 CFR 355):

Listed Substance: Not listed
Reportable Quantity: Not applicable
Planning Threshold: Not applicable

Section 311 & 312 (40 CFR 370):

Planning threshold: 10,000 pounds

Section 313 (40 CFR 372):

Listed Toxic Chemical: Not listed
Reporting Threshold: Not applicable

U.S. TSCA Status

Listed (40 CFR 710): Yes

State Regulations

State of California: Safe Drinking Water and Toxins Enforcement Act, 1986 (Proposition 65):

Carcinogen: No
Reproductive Toxin: No

Other Regulations

State Right To Know Laws: None known

Ingredient Information:

IDL Substance: No
DSL or NDSL Lists: DSL

SECTION 16: OTHER INFORMATION

HMIS Rating 0-0-0

Department Issuing SDS Health and Safety

Condition of Sale:

The information herein is believed to be accurate and reliable. Buyer and user assume all liability from use of this material. Follow label directions carefully. Timing, method of application, weather, plant, crop or turf conditions and other factors are beyond the control of the seller.