

SAFETY DATA SHEET

Microbicide

Prepared according to U.S. OSHA, CMA, ANSI, Canadian WHMIS regulations

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Microbicide**
PRODUCT NUMBER: MP8
PRODUCT DESCRIPTION: Biocide
U.N. NUMBER: UN2922
U.N. DANGEROUS GOODS CLASS: Corrosive Liquid, Toxic, n.o.s. Contains: (2-(Thiocyanomethylthio) benzothiazole, Methylene bis(thiocyanate), Class 8, (6.1), PGIII
SUPPLIER/MANUFACTURER'S NAME: **Primrose Oil Company, Inc.**
ADDRESS: 11444 Denton Drive, P.O. Box 29665, Dallas, Texas 75229 USA
EMERGENCY PHONE: 1-800-633-8253 (For Emergencies Only)
BUSINESS PHONE: 1-972-241-1100 (For product information)
WEB SITE: www.primrose.com
DATE OF PREPARATION: December 23, 2013
DATE OF LAST REVISION: August 16, 2019, September 17, 2025

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

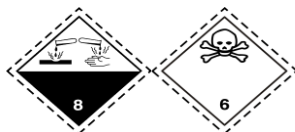
This product is a clear amber liquid with a slight odor.

HEALTH HAZARDS: Toxic if swallowed. Highly toxic by inhalation of mist. Corrosive to eyes and skin. Sensitizer

FLAMMABILITY: This product is a combustible product with a flash point of 158°F (70°C)

ENVIRONMENTAL EFFECTS: The Environmental effects of this product have not been investigated, however this product contains ingredients that may cause adverse effects to aquatic life.

US DOT SYMBOLS



CANADA (WHMIS) SYMBOLS



GHS HAZARD SYMBOL(S)



Signal Word: **Danger!**

COMPONENTS DETERMINING HAZARDS:

Diethylene Glycol Monomethyl Ether, 2-(thiocyanomethylthio) benzothiazole, Methylene bis(thiocyanate)

GHS HAZARD CLASSIFICATION(S):

Flammable Liquid Category 4
Reproductive Toxicity Category 2
Acute Inhalation Toxicity Category 2
Acute Oral Toxicity Category 4
Eye Irritation Category 2
Skin Irritation Category 2
Skin Corrosion/Irritation Category 1B
Skin Sensitivity Category 1
Acute Aquatic Toxicity Category 1
Chronic Aquatic Toxicity Category 1

HAZARD STATEMENTS:

Combustible liquid
Suspected of damaging fertility or the unborn child
Fatal if inhaled
Harmful if swallowed
Causes severe skin burns and eye damage
Causes serious eye irritation
Causes skin irritation
May cause an allergic skin reaction
Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects

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PRECAUTIONARY STATEMENTS:

Avoid exposure to skin and eyes
Use only with adequate ventilation.
Wash thoroughly after handling.
In case of an accident or if you feel unwell – seek medical advice and show label

HEALTH HAZARDS OR RISKS FROM EXPOSURE:

ACUTE:

INHALATION: May be harmful if inhaled. Do not breathe spray mists of the undiluted product. Effects will depend upon solution strength and length of time of exposure.

EYE CONTACT: Very hazardous in case of eye contact (irritant, corrosive). Inflammation of the eye is characterized by redness, watering and itching.

SKIN CONTACT: Very hazardous in case of skin contact (sensitizer). Hazardous in case of skin contact (corrosive, irritant). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.

INGESTION: Ingestion is not expected to be a primary route of exposure.

CHRONIC: Chronic feeding studies on the active ingredient did not reveal any significant adverse effects.

TARGET ORGANS: ACUTE: Eye, Skin, Respiratory System CHRONIC: Skin

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDS DISCLOSURE: This product does contain known hazardous materials in reportable levels as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200. As defined under Sara 311 and 312, this product contains known hazardous materials.

HAZARDOUS INGREDIENTS:	CAS #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Diethylene Glycol Monomethyl Ether	111-77-3	80 – 90%	HAZARD CLASSIFICATION: Repr Cat 3 RISK PHRASES: R63
2-(thiocyanomethylthio) benzothiazole	21564-17-0	1 – 10%	HAZARD CLASSIFICATION: [T] Toxic, [Xn] Harmful, [Xi] Irritant, [N] Dangerous to the Environment RISK PHRASES: R26, R22, R36/38, R43, R50/53
Methylene bis(thiocyanate)	6317-18-6	1 – 10%	HAZARD CLASSIFICATION: [T] Toxic, [C] Corrosive, [N] Dangerous to the Environment RISK PHRASES: R26, R25, R34, R43, R50

Each of the other components present are less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens)

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format.

SECTION 4 - FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual.

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention immediately.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing skin disorders conditions should avoid contact with this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

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SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT:

158°F (70°C)

AUTOIGNITION TEMPERATURE:

Not Established

FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): Not Established Upper (UEL): Not Established

FIRE EXTINGUISHING MATERIALS:

Dry chemical, carbon dioxide, foam. Do not use forced stream as this could cause fire to spread.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Combustible liquid and vapor.

Explosion Sensitivity to Mechanical Impact:

Not Sensitive.

Explosion Sensitivity to Static Discharge:

Not Sensitive

SPECIAL FIRE-FIGHTING PROCEDURES:

NFPA Rating System



Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations. Contain and recover if possible. Use non-sparking tools and equipment. Cover spilled product with sand, earth or other non-combustible absorbent material. Pickup spilled material immediately and place in appropriate containers. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

Do not discharge to sewers and surface waters. Notify authorities if entry occurs.

U.S. Regulations (CERCLA) requires reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product on you. Wash thoroughly after handling this product. Use in a well-ventilated location.

STORAGE AND HANDLING PRACTICES: Store containers in a cool, dry location. Keep away from sources of ignition. Keep container tightly closed when not in use. Protect from physical damage.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA
Diethylene Glycol Monomethyl Ether	111-77-3	Not Listed	Not Listed
2-(thiocyanomethylthio) benzothiazole	21564-17-0	Not Listed	Not Listed
Methylene bis(thiocyanate)	6317-18-6	Not Listed	Not Listed

Currently, International exposure limits are not established for all the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapors.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Respiratory protection is required for work areas where misting may occur. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93.

EYE PROTECTION: Wear safety glasses or chemical goggles to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

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HAND PROTECTION: Wear chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Use body protection appropriate to prevent skin contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
APPEARANCE & ODOR:	This product is a clear amber liquid with a slight odor
ODOR THRESHOLD (PPM):	Slight
VAPOR PRESSURE (mmHg):	Not Available
VAPOR DENSITY (AIR=1):	Not Available
EVAPORATION RATE (nBuAc = 1):	Not Available
BOILING POINT (C°):	>212°F (>100°C)
FREEZING POINT (C°):	<-22°F (<-30°C)
pH:	6 - 7
DENSITY:	1.03 g/cm ³
SOLUBILITY IN WATER (%):	Dispersible
VOC:	Not Available

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Do not heat and/or store above 50°C as decomposition may increase packaging pressure.

DECOMPOSITION PRODUCTS: Cyanide salts are formed when product contacts strong alkali. Thermal decomposition of product can produce toxic vapors of hydrogen cyanide and sulfur dioxide. Contact with fire may generate oxides of sulfur, nitrogen and carbon.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong acids, strong oxidizers and strong bases.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with incompatible materials and ignition sources

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: Toxicity data is not available:

This product contains 2.5% of each active ingredient, TCMTB and MTC. The following data was developed from tests conducted with a formulation containing 10% of each of the active ingredients.

- Oral : LD50/Rat = 250 mg/kg
- Dermal : LD50/Rabbit = 1670 mg/kg
- Dermal Sensitization: Guinea Pig: Strong Sensitizer
- Skin Irritation: Rabbits: Severely irritating, corrosive
- Eye Irritation: Rabbits: Corrosive

SUSPECTED CANCER AGENT: None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore are not considered to be, or suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: Contact with this product can be irritating to skin, eyes and respiratory system.

SENSITIZATION OF PRODUCT: One or more of the ingredients in this product are considered a sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: Diethylene glycol monomethyl ether has been reported to have adverse effects on fertility and/or the unborn child.

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: No specific data is available for this product, however this product is not expected to be readily biodegradable

EFFECT OF MATERIAL ON PLANTS or ANIMALS: No specific data is available on this product's effects on plants and animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: The following data is currently available on this product's effects on aquatic life. This product does contain ingredients that are considered hazardous to aquatic organisms.

LC50 = 0.011 mg/l 48 hours Daphnia magna, LC50 = 0.23 mg/l 96 hours Rainbow trout

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SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

SECTION 14 - TRANSPORTATION INFORMATION

US DOT; IATA; IMO; ADR:

THIS PRODUCT IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Corrosive Liquid, Toxic, n.o.s. Contains: (2-(Thiocyanomethylthio) benzothiazole, Methylene bis(thiocyanate)

HAZARD CLASS NUMBER and DESCRIPTION: Class 8 Corrosive, Sub-Class 6.1 Toxic

UN IDENTIFICATION NUMBER: UN2922

PACKING GROUP: PGIII

DOT LABEL(S) REQUIRED: Class 8 Corrosive and Class 6.1 Toxic

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2012): 154

MARINE POLLUTANT: None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:

This product is classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

This product is classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

This product is classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:

This product is classified as Dangerous Goods by the International Maritime Organization.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product is subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

SARA 313 REPORTING: CAS# 111-77-3 Diethylene Glycol Monomethyl Ether <90%

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: Yes Chronic Health: No Fire: Yes Reactivity: Yes

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act): This product is a registered pesticide. EPA Reg. No. 1448-171

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): None of the ingredients are on the California Proposition 65 list.

CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS). Class B Division 3 Combustible Liquid, Class D Division 1A Very Toxic Material and Class E Corrosive Material.

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INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed or Exempt
Australian Inventory of Chemical Substances (AICS):	Listed or Exempt
Korean Existing Chemicals List (ECL):	Listed or Exempt
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed or Exempt
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Listed or Exempt
Swiss Giftlist of Toxic Substances:	Listed or Exempt
U.S. TSCA:	Listed

SECTION 16 - OTHER INFORMATION

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Matt Moore

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