

SAFETY DATA SHEET

DOW AGROSCIENCES LLC

Product name: PROPIMAX™ EC Fungicide

Issue Date: 05/04/2015

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DOW AGROSCIENCES LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: PROPIMAX™ EC Fungicide

Recommended use of the chemical and restrictions on use

Identified uses: End use fungicide product

COMPANY IDENTIFICATION

DOW AGROSCIENCES LLC
9330 ZIONSVILLE RD
INDIANAPOLIS IN 46268-1053
UNITED STATES

Customer Information Number:

800-992-5994

info@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 800-992-5994

Local Emergency Contact: 352-323-3500

2. HAZARDS IDENTIFICATION

Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Flammable liquids - Category 4

Skin sensitisation - Category 1

Carcinogenicity - Category 2

Aspiration hazard - Category 1

Label elements

Hazard pictograms



Signal word: **DANGER!**

Hazards

Combustible liquid.
May be fatal if swallowed and enters airways.
May cause an allergic skin reaction.
Suspected of causing cancer.

Precautionary statements**Prevention**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection.
Use personal protective equipment as required.

Response

IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
IF ON SKIN: Wash with plenty of soap and water.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Propiconazole	60207-90-1	41.8%
Heavy aromatic naphtha	64742-94-5	44.5%
Naphthalene	91-20-3	4.6%
1,2,4-Trimethylbenzene	95-63-6	2.2%

Propylene glycol	57-55-6	2.0%
Balance	Not available	4.9%

4. FIRST AID MEASURES

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

Skin contact: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be available in work area.

Eye contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Maintain adequate ventilation and oxygenation of the patient. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment. Skin contact may aggravate preexisting dermatitis.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

Unsuitable extinguishing media: no data available

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep out of reach of children. Keep away from heat, sparks and flame. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

Conditions for safe storage: Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Naphthalene	Dow IHG	TWA	10 ppm
	Dow IHG	TWA	Absorbed via skin
	Dow IHG	STEL	15 ppm
	Dow IHG	STEL	Absorbed via skin
	ACGIH	TWA	10 ppm
	ACGIH	TWA	Absorbed via skin
	OSHA Z-1	TWA	50 mg/m ³ 10 ppm
1,2,4-Trimethylbenzene	ACGIH	TWA	25 ppm
Propylene glycol	US WEEL	TWA	10 mg/m ³

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquid.
Color	Yellow to brown
Odor	Aromatic
Odor Threshold	No test data available
pH	5.36 1% CIPAC MT 75.2
Melting point/range	Not applicable
Freezing point	No test data available
Boiling point (760 mmHg)	Not applicable
Flash point	closed cup 66.5 °C (151.7 °F) <i>Closed Cup</i>
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	no data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	Not applicable
Relative Density (water = 1)	1.0441 at 20 °C (68 °F) <i>Digital Density Meter (Oscillating Coil)</i>
Water solubility	emulsifiable
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	Not applicable
Decomposition temperature	No test data available
Dynamic Viscosity	10.9 mPa.s at 25 °C (77 °F)
Kinematic Viscosity	No test data available
Explosive properties	No
Oxidizing properties	No significant increase (>5C) in temperature.
Liquid Density	1.042 g/cm ³ at 20 °C (68 °F) <i>Digital density meter</i>
Molecular weight	no data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Thermally stable at recommended temperatures and pressures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Active ingredient decomposes at elevated temperatures.

Incompatible materials: Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

As product: Single dose oral LD50 has not been determined. Based on information for component(s): Estimated.
LD50, Rat, 3,000 mg/kg

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined. Based on information for component(s): Estimated.
LD50, Rabbit, > 3,500 mg/kg

Acute inhalation toxicity

Prolonged excessive exposure to mist may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. Signs and symptoms of excessive exposure may include: May cause central nervous system effects. Anesthetic or narcotic effects. Headache. Sweating. Nausea and/or vomiting.

As product: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.
Prolonged contact may cause skin irritation with local redness.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation

May cause slight eye irritation.
May cause slight corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Sensitization

For the active ingredient(s):
Skin contact may cause an allergic skin reaction.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the active ingredient(s):

In animals, effects have been reported on the following organs:

Liver.

For the solvent(s):

In animals, effects have been reported on the following organs:

Gastrointestinal tract.

Respiratory tract.

Thyroid.

Urinary tract.

Lung.

Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.

Ingestion of naphthalene by humans has caused hemolytic anemia.

Carcinogenicity

For the active ingredient(s): Has caused cancer in some laboratory animals. However, the relevance of this to humans is unknown. Contains naphthalene which has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

Teratogenicity

For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Has caused birth defects in lab animals only at doses producing severe toxicity in the mother.

Reproductive toxicity

For the active ingredient(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity

For the active ingredient(s): For the majority of components: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative. For the minor component(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases.

Aspiration Hazard

Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. May be fatal if swallowed and enters airways.

COMPONENTS INFLUENCING TOXICOLOGY:**Propiconazole****Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed.

LC50, Rat, 4 Hour, dust/mist, > 5.8 mg/l

Heavy aromatic naphtha**Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, > 4.8 mg/l

LC50, Rat, 4 Hour, vapour, > 0.2 mg/l No deaths occurred following exposure to a saturated atmosphere.

Naphthalene**Acute inhalation toxicity**

Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Excessive exposure may cause lung injury. Signs and symptoms of excessive exposure may include: Headache. Confusion. Sweating. Nausea and/or vomiting.

LC50, Rat, 4 Hour, vapour, > 0.41 mg/l The LC50 value is greater than the Maximum Attainable Concentration.

1,2,4-Trimethylbenzene**Acute inhalation toxicity**

Prolonged excessive exposure may cause serious adverse effects, even death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

LC50, Rat, 4 Hour, vapour, 18 mg/l

Propylene glycol**Acute inhalation toxicity**

Mist may cause irritation of upper respiratory tract (nose and throat). LC50, Rabbit, 2 Hour, Aerosol, 317.042 mg/l No deaths occurred at this concentration.

Balance**Acute inhalation toxicity**

The LC50 has not been determined.

Carcinogenicity**Component**
Naphthalene**List**

IARC

US NTP

ACGIH

Classification

Group 2B: Possibly carcinogenic to humans

Reasonably anticipated to be a human carcinogen

A3: Confirmed animal carcinogen with unknown relevance to humans.

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Toxicity**Propiconazole****Acute toxicity to fish**

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50, *Leuciscus idus* (Golden orfe), 96 Hour, 5.1 mg/l

LC50, *Oncorhynchus mykiss* (rainbow trout), 96 Hour, 0.83 - 506 mg/l

LC50, *Cyprinus carpio* (Carp), 96 Hour, 5.7 - 46 mg/l

Acute toxicity to aquatic invertebrates

LC50, saltwater mysid *Mysidopsis bahia*, 96 Hour, 0.5 mg/l, Method Not Specified.

LC50, scud *Gammarus* sp., flow-through test, 96 Hour, 1.3 mg/l, Method Not Specified.

Acute toxicity to algae/aquatic plants

EC50, *Pseudokirchneriella subcapitata* (green algae), 96 Hour, 0.57 mg/l

EC50, diatom *Navicula* sp., 11 d, 0.093 mg/l

Chronic toxicity to fish

Cyprinodon variegatus (sheepshead minnow), 100 d, 0.068 mg/l

Chronic toxicity to aquatic invertebrates

Daphnia magna (Water flea), 21 d, 0.31 mg/l

Toxicity to Above Ground Organisms

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm).

oral LD50, *Coturnix japonica* (Japanese quail), 1,777 - 2,223 mg/kg

dietary LC50, *Anas platyrhynchos* (Mallard duck), 8 d, > 5,620 ppm

contact LD50, *Apis mellifera* (bees), > 100micrograms/bee

oral LD50, *Apis mellifera* (bees), > 100micrograms/bee

Heavy aromatic naphtha

Acute toxicity to fish

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, *Gambusia affinis* (Mosquito fish), 96 Hour, 811 mg/l

Acute toxicity to algae/aquatic plants

EC50, Algae, 72 Hour, 21 - 165 mg/l

Naphthalene

Acute toxicity to fish

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), 96 Hour, 0.11 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 1.6 - 24.1 mg/l

Chronic toxicity to fish

NOEC, Other, flow-through, 40 d, mortality, 0.37 mg/l

1,2,4-Trimethylbenzene

Acute toxicity to fish

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, *Pimephales promelas* (fathead minnow), flow-through test, 96 Hour, 7.7 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, 3.6 mg/l

Propylene glycol

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 40,613 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

LC50, Ceriodaphnia dubia (water flea), static test, 48 Hour, 18,340 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate inhibition, 19,000 mg/l, OECD Test Guideline 201

Toxicity to bacteria

NOEC, Pseudomonas putida, 18 Hour, > 20,000 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 d, number of offspring, 13,020 mg/l

Balance

Acute toxicity to fish

No relevant data found.

Persistence and degradability

Propiconazole

Biodegradability: No relevant information found.

Theoretical Oxygen Demand: 2.01 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitizer: OH radicals

Atmospheric half-life: 5.533 Hour

Method: Estimated.

Heavy aromatic naphtha

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Naphthalene

Biodegradability: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Theoretical Oxygen Demand: 3.00 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	57.000 %
10 d	71.000 %
20 d	71.000 %

Photodegradation**Test Type:** Half-life (indirect photolysis)**Sensitizer:** OH radicals**Atmospheric half-life:** 5.9 Hour**Method:** Estimated.**1,2,4-Trimethylbenzene****Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Not applicable

Biodegradation: 4 - 18 %**Exposure time:** 28 d**Method:** OECD Test Guideline 301C or Equivalent**Theoretical Oxygen Demand:** 3.19 mg/mg**Photodegradation****Test Type:** Half-life (indirect photolysis)**Sensitizer:** OH radicals**Atmospheric half-life:** 0.641 d**Method:** Estimated.**Propylene glycol****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

10-day Window: Pass

Biodegradation: 81 %**Exposure time:** 28 d**Method:** OECD Test Guideline 301F or Equivalent

10-day Window: Not applicable

Biodegradation: 96 %**Exposure time:** 64 d**Method:** OECD Test Guideline 306 or Equivalent**Theoretical Oxygen Demand:** 1.68 mg/mg**Chemical Oxygen Demand:** 1.53 mg/mg**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	69.000 %
10 d	70.000 %
20 d	86.000 %

Photodegradation
Atmospheric half-life: 10 Hour
Method: Estimated.

Balance

Biodegradability: No relevant data found.

Bioaccumulative potential

Propiconazole

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 3.72 Measured

Heavy aromatic naphtha

Bioaccumulation: For similar material(s): Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

Naphthalene

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 3.3 Measured

Bioconcentration factor (BCF): 40 - 300 Fish. 28 d Measured

1,2,4-Trimethylbenzene

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 3.63 Measured

Bioconcentration factor (BCF): 33 - 275 Cyprinus carpio (Carp) 56 d Measured

Propylene glycol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -1.07 Measured

Bioconcentration factor (BCF): 0.09 Estimated.

Balance

Bioaccumulation: No relevant data found.

Mobility in soil

Propiconazole

Potential for mobility in soil is medium (Koc between 150 and 500).

Partition coefficient(Koc): 382 - 1789 Measured

Heavy aromatic naphtha

No relevant data found.

Naphthalene

Potential for mobility in soil is medium (Koc between 150 and 500).

Partition coefficient(Koc): 240 - 1300 Measured

1,2,4-Trimethylbenzene

Potential for mobility in soil is low (Koc between 500 and 2000).

Partition coefficient(Koc): 720 Estimated.

Propylene glycol

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient(Koc): < 1 Estimated.

Balance

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Combustible liquid, n.o.s.(Naphthalene, 1,2,4-Trimethylbenzene)
UN number	NA 1993
Class	CBL
Packing group	III
Reportable Quantity	Naphthalene

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Propiconazole, Naphthalene)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Propiconazole
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(Propiconazole, Naphthalene)
UN number	UN 3082
Class	9
Packing group	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Fire Hazard
Acute Health Hazard
Chronic Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

Components	CASRN
1,2,4-Trimethylbenzene	95-63-6
Naphthalene	91-20-3
Propiconazole	60207-90-1

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Components	CASRN
Naphthalene	91-20-3
1,2,4-Trimethylbenzene	95-63-6
Propylene glycol	57-55-6
Heavy aromatic naphtha	64742-94-5

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

United States TSCA Inventory (TSCA)

This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number: 62719-346

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

WARNING

Causes substantial but temporary eye injury
 Harmful if swallowed, inhaled or absorbed through the skin.
 Prolonged or repeated skin contact may cause allergic reactions in some individuals

16. OTHER INFORMATION

Hazard Rating System

NFPA

Health	Fire	Reactivity
1	2	0

Revision

Identification Number: 101195259 / A211 / Issue Date: 05/04/2015 / Version: 5.0

DAS Code: GF-242

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

Absorbed via skin	Absorbed via skin
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short term exposure limit
TWA	Time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

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