



Nufarm Propiconazole Fungicide Safety Data Sheet

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17

{Reserved}

1. Identification

Product Name: Nufarm Propiconazole Fungicide

PCP Registration No.: 30367

Refer to the approved product label for handling and use instructions.

Product Type: Fungicide

Supplier: Nufarm Agriculture Inc.
Suite 350, 2618 Hopewell Place NE
Calgary, Alberta, T1Y 7J7, Canada
1-800-868-5444

Telephone Numbers: 24 Hour Emergency Response Number, Chemtrec, 1-800-424-9300.
For medical emergencies, ProPharma Group, 1-877-325-1840.
For product and use information, Nufarm Agriculture Inc.,
1-800-868-5444.

2. Hazard Identification

Classified according to UN GHS Version 5.

Physical Hazards:

Flammable liquid Category 4

Health Hazards:

Acute toxicity (Oral) Category 4

Acute toxicity (Dermal) Category 5

Acute toxicity (Inhalation) Category 4

Eye irritation Category 2A

Skin irritation Category 2

Skin sensitizer Category 1B

Environmental Hazards:

Hazardous to aquatic environment, acute Category 1

Signal Word:

WARNING

Hazard Statements:

Combustible liquid. Harmful if swallowed. May be harmful in contact with skin.

Harmful if inhaled. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Very toxic to aquatic life.

Nufarm Propiconazole Fungicide

Safety Data Sheet

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17

{Reserved}



Precautionary Statements:

Keep away from flames and hot surfaces.

Avoid contact with skin, eyes and clothing. Wear goggles or face shield during mixing/loading. Wear coveralls or a long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. After use, wash hands and other exposed skin. Remove and wash contaminated clothing before reuse. Avoid breathing spray mist. Harmful if swallowed.

This product contains an active ingredient and aromatic petroleum distillates which are toxic to aquatic organisms.

3. Composition / Information on Ingredients

| Hazardous Components | CAS No. | Wt. % |
|--|------------|-----------|
| Propiconazole | 60207-90-1 | 40.5-43.0 |
| Chemical Synonyms: 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole | | |
| Solvent naphtha (petroleum), heavy aromatic | 64742-94-5 | 32.2-34.2 |
| Naphthalene (as component of solvent) | 91-20-3 | 3.3* |
| 1,2,4-trimethylbenzene (as component of solvent) | 95-63-6 | 0.6* |

* Percentage of total amount.

Other ingredients are considered non-hazardous.

Content as Expressed on Product Label

Propiconazole ... 418 g/L

4. First Aid Measures

If swallowed, call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

If in eyes, hold eye 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 eye. Call a poison control centre or doctor for treatment advice.

If inhaled, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Nufarm Propiconazole Fungicide Safety Data Sheet

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17

{Reserved}

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

5. Fire-fighting Measures

Extinguishing Media: Foam, water spray, fog.

Special Firefighting Procedures: Firefighters should wear self-contained breathing apparatus and full protective clothing when fighting chemical fires. Minimize and contain water runoff.

Flash Point:..... 62 C

Conditions of Flammability: Combustible liquid. May burn under fire conditions.

Hazardous Decomposition Products: ... NO_x, CO, CO₂ and chlorides.

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 1 Flammability: 2 Reactivity: 0

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. Accidental Release Measures

Use safety equipment and procedures appropriate to the size of the spill. Keep unnecessary people away. Avoid runoff to natural waters and sewers. Surround and absorb spills with inert material such as perlite, sawdust, clay granules, vermiculite, sand or dirt. Contain all affected material in a closed, labeled container for proper disposal. Isolate from other waste materials. Clean contaminated area such as hard surfaces with detergent and water, collecting cleaning solution for proper disposal. Large spills to soil or similar surfaces may necessitate removal of top soil.

7. Handling and Storage

Handling: Avoid contact with skin, eyes and clothing. Wear goggles or face shield during mixing/loading. Wear coveralls or a long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. After use, wash hands and other exposed skin. Remove and wash contaminated clothing before reuse. Avoid breathing spray mist. Do not eat, drink or smoke when using this product.

Storage: Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. Store at normal ambient temperatures.

8. Exposure Controls / Personal Protection

Engineering Controls: Use only outdoors or in a well-ventilated area.

Personal Protective Equipment: Goggles or face shield, coveralls or a long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal.

Exposure Guidelines:

| Component | TWA* | STEL** | Reference/Note |
|------------------------------|----------------------|--------|-------------------------|
| Propiconazole | NE | NE | None found |
| Solvent naphtha (petroleum), | 50 mg/m ³ | NE | Supplier recommendation |

Nufarm Propiconazole Fungicide Safety Data Sheet

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17

{Reserved}

| | | | |
|--|---------------------------------|--------------------------------|-------|
| heavy aromatic | | | |
| Naphthalene (as component of solvent) | 10 ppm 52 mg/m ³ | 15 ppm 79 mg/m ³ | ACGIH |
| 1,2,4-trimethylbenzene (as component of solvent) | 25 ppm 125 mg/m ³ | NE | ACGIH |

*Time-weighted Average, 8-hour unless otherwise noted.

**Short Term Exposure Limit

NE = Not Established

Refer to approved product label for additional exposure control guidance.

9. Physical and Chemical Properties

NOTE: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification. If no value is determined for the formulation, the value listed is the most relevant value of the predominant ingredient(s).

| | |
|---|--|
| Appearance (physical state, colour, etc.) | clear-brownish liquid |
| Odour | aromatic |
| Odour threshold | not available |
| pH | 6 - 8 |
| Melting point / Freezing point | not available |
| Initial boiling point and boiling range | not available |
| Flash point | 62C |
| Evaporation rate | <0.01 (n-butyl acetate = 1) (solvent) |
| Flammability (solids, gases) | not applicable |
| Upper / Lower flammability or explosive limits | LEL = 0.7, UEL = 5.6 vol. % in air (solvent) |
| Vapour pressure | 4.0 Pa @ 20C (solvent) 5.6 x 10 ⁻² mPa @ 25C (propiconazole) |
| Vapour density | 5.6 @ 101 kPa (air = 1) (solvent) |
| Relative density | 1.075 |
| Solubility(ies) | negligible in water, emulsifiable |
| Partition coefficient: n-octanol/water | logP = 3.72 @ pH 6.6, 25C (propiconazole) |
| Autoignition temperature | not available |
| Decomposition temperature | >320C (propiconazole) |
| Viscosity | 45 cPs |

10. Stability and Reactivity

Reactivity: Not reactive.

Chemical Stability: Stable under normal handling and storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Protect from sunlight, open flame and sources of heat. Decomposes upon heating.

Incompatible Materials: Strong acids and strong bases.

Nufarm Propiconazole Fungicide Safety Data Sheet

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17

{Reserved}

Hazardous Decomposition Products: NO_x, CO, CO₂ and chlorides.

11. Toxicological Information

Likely routes of exposure: Inhalation, ingestion, skin and eye contact.

Eye contact: Causes serious eye irritation.

Skin contact: May be harmful if absorbed through skin. Causes skin irritation. May cause an allergic skin reaction.

Ingestion: Harmful if swallowed.

Inhalation: Harmful if inhaled.

Medical Conditions Aggravated by Exposure: Skin exposure may aggravate preexisting skin conditions. Inhalation of mist may aggravate preexisting respiratory conditions.

Toxicological Data:

Acute oral LD₅₀ (mg/kg) 982 (Rat, female); >2000 (Rat, male)

Acute dermal LD₅₀ (mg/kg) >5000 (Rat)

Acute inhalation LC₅₀ (mg/l) >2.04 (Rat, 4-hour exposure)

Skin corrosion/irritation Considered as severely irritating to skin (Rabbit)

Serious eye damage/irritation Considered as moderately irritating to the eye (Rabbit)

Respiratory or skin sensitization ... Considered to be a contact dermal sensitizer (Guinea Pig)

Germ cell mutagenicity Propiconazole did not demonstrate genotoxic potential in standard *in vitro* assays. Products similar to the hydrocarbon component are not considered to be mutagenic.

Carcinogenicity Available mechanistic studies suggest that propiconazole may have a liver tumour promoting effect in rats. Products similar to the hydrocarbon component are not considered to be mutagenic and are unlikely to cause tumors.

Reproductive toxicity Animal reproduction studies with propiconazole indicate there is no increased sensitivity of the young relative to maternal animals.

12. Ecological Information

Ecotoxicity:

Data are for propiconazole technical from published sources.

Aquatic Invertebrate: 48-Hour EC₅₀ (mg/L) 2.2 – 10.2 (*Daphnia*)

Fish: 96-Hour LC₅₀ (mg/L) 0.85 – 5.3 (Rainbow Trout), 1.3 – 6.4 (Bluegill Sunfish), 0.095 (Fathead minnow), 6.8 (Carp), 5.1 (Golden Orfe)

Algae: 5 to 9-Day EC₅₀ (mg/L) .. 0.76 (*Scenedesmus*), 1.53 (*Pseudokirchneriella*)

Birds: Oral LD₅₀ (mg/kg) 2223 (Japanese Quail), 2825 (Bobwhite Quail), >2510 (Mallard Duck); 5-Day Dietary LC₅₀ >1000 (Japanese Quail), >5620 (Bobwhite, Mallard)

Bees: Oral and Contact LD₅₀ >100 µg/bee

Persistence and Degradability: In the terrestrial environment, propiconazole and some of its degradation products are expected to be slightly persistent to persistent (DT₅₀=31.8-469 days). Biotransformation is an important route of transformation.

Nufarm Propiconazole Fungicide Safety Data Sheet

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17

{Reserved}

Mobility in Soil: Propiconazole has a medium to low mobility in soil depending on the soil type. In field studies, propiconazole was only detected in the upper soil layers whereas some transformation products have been shown to move up to 60 cm down the soil profile.

Bioaccumulation Potential: Propiconazole can bioaccumulate, but will deplete.

13. Disposal Considerations

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Disposal should be made in accordance with federal, provincial and local regulations.

Do not reuse container for any purpose. If applicable, return container in accordance with return program. If a recyclable container, dispose of at a container collection site. Contact local distributor, dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site, triple or pressure rinse the empty container adding rinsings to spray tank, and make container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

14. Transport Information

Canadian TDG Description (Road & Rail): Not regulated for transport by road/rail.

United States:

DOT Description:

< 119 gallons per complete package

Non Regulated – See 49 CFR 173.132(b)(3) & 172.101 Appendix A

≥ 119 gallons per complete package

NA1993, Combustible, Liquid, n.o.s., (Naphthalene), 3, III

IMDG

Not Regulated

IATA

Not Regulated

15. Regulatory Information

Pest Control Products Act Registration Number: 30367

Read the approved label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

Nufarm Propiconazole Fungicide Safety Data Sheet

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17

{Reserved}

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control product label:



WARNING POISON
WARNING: EYE AND SKIN IRRITANT
POTENTIAL SKIN SENSITIZER

WHMIS exempt.

16. Other Information

This Safety Data Sheet (SDS) is designed to comply with the Globally Harmonized System (GHS) of classification, and the *Hazardous Products Regulations*.

This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use. The product labeling provides that information specifically for product use as intended.

Company and published information is used in the development of this SDS. The information herein is presented in good faith and believed accurate at the date of publication. However, no warranty, expressed or implied, is given.

Revisions to the last issue: Addition of PMRA guidance info to Section 15.

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17