

Issue Date: 2022-02-12

Supersedes Date: N/A

1. Identification

Product Name: Crusade Fungicide

PCP Registration No.: 35831

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

Product Type: Fungicide

Supplier: Nufarm Agriculture Inc.
5101, 333 96th Avenue NE
Calgary, Alberta T3K 0S3, 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.

Health Hazards:

Serious eye damage	Category 1
Skin irritation	Category 2
Acute toxicity (Oral)	Category 4
Reproduction toxicity	Category 1

Environmental Hazards:

Hazardous to aquatic environment, long-term	Category 2
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Signal Word:

DANGER

Hazard Statements:

Causes serious eye damage. Corrosive to skin. Causes skin irritation. Harmful if swallowed. Suspected of damaging fertility or the unborn child. Toxic to aquatic life with long lasting effects.



Precautionary Statements:

Crusade Fungicide Safety Data Sheet

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General:

If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use.

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, clothing, eye and face protection.

Response:

IF exposed or concerned: Get medical advice/attention.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

3. Composition / Information on Ingredients

Hazardous Components	CAS No.	Wt. %
Prothioconazole	178928-70-6	9.8-10.8
Tebuconazole	107534-96-3	12.4-13.7
N,N-Dimethylnonamide	6225-08-7	54-57
N-Butyl pyrrolidone	3470-98-2	11-12

Other ingredients are considered non-hazardous.

Content as Expressed on Product Label

Prothioconazole ... 100 g/L

Tebuconazole ... 126 g/L

4. First Aid Measures

If swallowed: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If in eyes: Hold eye open and rinse slowly and gently with water for 15 to 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 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.

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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.

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

Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.

5. Fire-fighting Measures

Extinguishing Media: Fine water spray, dry powder, carbon dioxide, alcohol-resistant foam.

Special Firefighting Procedures: Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces. Minimize and contain water runoff.

Flash Point >100 C (aqueous solution)

Conditions of Flammability None

Hazardous Decomposition Products: May emit hazardous smoke and fumes if involved in fires or exposed to extreme heat.

6. Accidental Release Measures

Spills & Disposal:

Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal.

Personal Protection:

Wear coveralls over long pants, long-sleeved shirt, chemical resistant gloves, socks and chemical-resistant footwear during mixing, loading, application, clean-up and repair. In addition, wear protective eyewear (goggles or face shield) during mixing, loading, clean-up and repair. Coveralls and gloves are not required during application within a closed cab or cockpit.

7. Handling and Storage

Handling: Do NOT contaminate dams, rivers or streams, or any other water bodies with pesticide or used containers.

Storage: Store in the closed, original container in a cool, well-ventilated area.

Do not store for prolonged periods in direct sunlight.

8. Exposure Controls / Personal Protection

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

Personal Protective Equipment: See Section 6.

Exposure Guidelines: No exposure standard has been established for this product.

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General: Re-entry period: Do not enter treated area until spray has dried.
After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.
After each day's use, wash contaminated clothing and safety equipment.

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 gold liquid
Odour	wood resin-like
Odour threshold	not available
pH	4.96 (1% soln)
Melting point / Freezing point	not available
Initial boiling point and boiling range	not available
Flash point	>103.9°C (aqueous solution)
Evaporation rate	not available
Flammability (solids, gases)	not applicable
Upper / Lower flammability or explosive limits	not applicable
Vapour pressure	not available
Vapour density	not available
Relative density	0.972 at 25°C
Solubility(ies)	Disperses in water
Partition coefficient: n-octanol/water	not applicable
Autoignition temperature	not applicable
Decomposition temperature	not applicable
Viscosity	28.3 mPa(s) (20°C)

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: Excessive heat. Do not store near heat or flame.

11. Toxicological Information

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

Eye contact: Causes severe eye irritation / corrosion. Causes redness and tearing.

Skin contact: Corrosive to the skin. Moderate skin sensitizer.

Ingestion: Low toxicity however, swallowing large amounts of concentrate may cause nausea and vomiting.

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Acute oral LD₅₀ (mg/kg) 1750 (Rat)
Acute dermal LD₅₀ (mg/kg) >5000 (Rat)
Acute inhalation LC₅₀ (mg/l) >5.05 (Rat, 4-hour exposure)
Skin corrosion/irritation Moderately irritating to the skin (Rabbit)
Serious eye damage/irritation Severely irritating / corrosive to the eye (Rabbit)
Respiratory or skin sensitization ... Moderate skin sensitizer
Reproductive toxicity Evidence from animal studies suggests the potential for developmental toxicity on repeated or prolonged exposure.

12. Ecological Information

Not readily degradable.

Spray drift should be avoided. Read the label for more information.

Ecotoxicity:

Data are from laboratory studies conducted on prothioconazole.

Fish: 96-Hour LC₅₀ (mg/L) 0.308 (Rainbow Trt)

Data are from laboratory studies conducted on tebuconazole.

Fish: 96-Hour LC₅₀ (mg/L) 0.012 (Rainbow Trt)

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):

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Prothioconazole, Tebuconazole), Class 9, PG III.

Marine pollutant.

Section 1.45.1 of the TDG Regulations provides an exemption from documentation and safety marks only for this product and only when transported by a road or railway vehicle.

United States:

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DOT:

< 41 gallons per completed package

Non Regulated

≥ 41 gallons per completed package

UN 3082, Environmentally hazardous substances, liquid, n.o.s., (Prothioconazole, Tebuconazole), 9, III

IMDG

Non Regulated

IATA

Non Regulated

15. Regulatory Information

Pest Control Products Act Registration Number: 35831

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

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:

DANGER – CORROSIVE TO EYES AND SKIN

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: New.

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