



**Parasol Flowable Fungicide
Safety Data Sheet**

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17

{Reserved}

1. Identification

Product Name: Parasol Flowable Fungicide

PCP Registration No.: 25901

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

Product Type: Fungicide/Bactericide

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:

None

Health Hazards:

Eye irritation Category 2B

Acute toxicity (Inhalation) Category 4

Acute toxicity (Oral) Category 5

Environmental Hazards:

Hazardous to aquatic environment, acute Category 1

Signal Word:

WARNING

Hazard Statements:

Causes eye irritation. Harmful if inhaled. May be harmful if swallowed. Very toxic to aquatic life.



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Precautionary Statements:

Causes eye irritation. Avoid contact with skin, eyes and clothing. Wear goggles or face shield during mixing/loading. Wear 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. Use only outdoors or in a well-ventilated area.

May be harmful if swallowed. Do not eat, drink or smoke when using this product.

This product contains an active ingredient which is toxic to aquatic organisms.

3. Composition / Information on Ingredients

Hazardous Components	CAS No.	Wt. %
Copper hydroxide	20427-59-2	36.5-38.5
Chemical Synonyms: Copper (II) hydroxide; Cupric hydroxide; Cu(OH) ₂		
Propylene glycol	57-55-6	5.7-6.3
Trisodium phosphate	7601-54-9	0.65-0.85
Sodium hydroxide	1310-73-2	0.65-0.85

Other ingredients are considered non-hazardous.

Content as Expressed on Product Label

Elemental copper, present as copper hydroxide ... 24.4%

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 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.

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

5. Fire-fighting Measures

Extinguishing Media: Water fog, alcohol foam, carbon dioxide, dry chemical.

Special Firefighting Procedures: Firefighters should wear self-contained breathing apparatus

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and full protective clothing when fighting chemical fires. Minimize and contain water runoff.

Flash Point:..... >107 C

Conditions of Flammability: None

Hazardous Decomposition Products:... Copper hydroxide decomposes to CuO and H₂O above 140C.

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 2 Flammability: 1 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 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. May be stored at any temperature. Avoid excessive heat.

8. Exposure Controls / Personal Protection

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

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

Exposure Guidelines:

Component	TWA*	STEL**	Reference/Note
Copper hydroxide	1 mg/m ³ (as Cu, dust or mist)	NE	WorkSafeBC, 2015
Propylene glycol	1 mg/m ³	NE	ERPG/WEEL, 2013
Trisodium phosphate	NE	5 mg/m ³	ERPG/WEEL, 2013
Sodium hydroxide	NE	2 mg/m ³ (Ceiling)	WorkSafeBC, 2015

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

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**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.)	blue liquid
Odour	mild metallic
Odour threshold	not available
pH	8.58 (1% w/w dispersion)
Melting point / Freezing point	not available
Initial boiling point and boiling range	not available
Flash point	>107C
Evaporation rate	not available
Flammability (solids, gases)	not applicable
Upper / Lower flammability or explosive limits	not available
Vapour pressure	negligible
Vapour density	not available
Relative density	1.43
Solubility(ies)	dispersible in water, Cu(OH) ₂ sparingly soluble
Partition coefficient: n-octanol/water	not applicable
Autoignition temperature	not available
Decomposition temperature	140C
Viscosity	1600-2000 cP @ 25C

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.

Incompatible Materials: Acids and sulphur.

Hazardous Decomposition Products: Copper hydroxide decomposes to CuO and H₂O above 140C.

11. Toxicological Information

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

Eye contact: Causes eye irritation.

Skin contact: May cause skin irritation, generally of minimal degree.

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Ingestion: May be harmful if swallowed. No significant adverse health effects are expected if only small amounts are swallowed.

Inhalation: Harmful if inhaled. May cause irritation of the mucous membranes.

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) >2000 mg/kg (Rat, female)

Acute dermal LD₅₀ (mg/kg) >5000 (Rat, male & female)

Acute inhalation LC₅₀ (mg/l) >2.06 (Rat, male & female, 4-hour, nose-only exposure)

Skin corrosion/irritation Slightly irritating to the skin (Rabbit)

Serious eye damage/irritation Moderately irritating to the eye (Rabbit)

Respiratory or skin sensitization ... Not considered as a contact dermal sensitizer (Guinea pig)

Germ cell mutagenicity The overall results of genotoxicity studies performed with various copper compounds, *in vitro* and *in vivo*, were equivocal, and mutagenic effects from inhalation exposure cannot be excluded.

Carcinogenicity Copper hydroxide is not considered as carcinogenic.

Reproductive toxicity Copper hydroxide is not considered a reproductive toxin.

12. Ecological Information

Ecotoxicity:

Data are for copper hydroxide and elemental copper, from published and company sources.

Aquatic Invertebrate: 48-Hour EC₅₀ (mg Cu/L) 0.0422 (*Daphnia*)

Fish: 96-Hour LC₅₀ (mg Cu/L) ... 10 (Rainbow Trout)

Algae: EC₅₀ (mg Cu/L) 22.5 (exposure duration and species unspecified)

Birds: Oral LD₅₀ (mg/kg) 464 (Bobwhite Quail), 8-Day Dietary LC₅₀ >5000 ppm (Mallard Duck, Bobwhite Quail)

Bees: Contact LD₅₀ 68.3 µg/bee

Persistence and Degradability: Copper is a chemical element and does not degrade.

Mobility in Soil: The degree of mobility of copper in the environment depends upon the pH of ambient soils and waters. The higher the acidity, the more soluble copper salts are and, hence, the more mobile.

Bioaccumulation Potential: Negligible.

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

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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., (copper hydroxide), 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.

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

IMDG

UN3082, Environmentally hazardous substance, liquid, n.o.s., (copper hydroxide), 9, III,
Marine Pollutant

IATA

UN3082, Environmentally hazardous substance, liquid, n.o.s., (copper hydroxide), 9, III,
Marine Pollutant

15. Regulatory Information

Pest Control Products Act Registration Number: 25901

OPAC Schedule: 4

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:

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CAUTION POISON
WARNING: EYE IRRITANT

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.

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