7 November 2023

SAFETY DATA SHEET

Hortcare® Copper Hydroxide 300

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Identifiers

Product name:	**Hortcare® Copper Hydroxide 300**
Other Name(s):	Water dispersible granule containing 300 g/kg copper

1.2 Recommended use of the chemical and restrictions on use

Product Use:	Fungicide, bactericide

1.3 Supplier contact details:

Company name:	Grosafe Chemicals Limited
Address:	20 Jean Batten Drive Mt Maunganui, 3116
Telephone:	0800 220 002
Email:	info@grosafe.co.nz
Emergency telephone number	0800 CHEMCALL (0800 243 622)

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the Hazardous Chemical

Hazardous substance according to Hazardous Substances and New Organisms (HSNO) Act 1996
HSNO Substance Approval: HSR000739
Hazard Classifications: Acute oral toxicity Category 4; Serious eye damage Category 1; Skin sensitisation Category 1; Specific target organ toxicity – repeated exposure Category 2; Hazardous to the aquatic environment acute Category 1; Hazardous to the aquatic environment chronic Category 1.

2.2 Label elements:

Pictograms:

Signal Word: **DANGER**

Hazard statements:

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
	Harmful to terrestrial vertebrates.

Additional labelling statements required under Hazardous Substances (Labelling) Notice 2017.

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Do not apply directly into or onto water.

Precautionary statements:

Prevention

P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe dust/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear eye protection/face protection and protective gloves.

Response

P101	If medical advice is needed, have product container or label at hand.
P314	Met medical advice/attention if you feel unwell.
P301 + P312	IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P330	Rinse mouth.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor.
P391	Collect spillage.

Storage

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Disposal

P501	Dispose of contents/container in accordance with local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS	Proportion % w/w
Cupric hydroxide	20427-59-2	46 - 83*
Other ingredients	Trade secret	balance

*To give equivalent to 300g/kg copper.

This is a commercial product whose exact ratio of components may vary slightly.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Information:

For advice call the National Poison Centre, telephone 0800 POISON [0800 764 766]. Have product container or label at hand.

IF SWALLOWED: Rinse mouth. Call the NATIONAL POISONS CENTRE or doctor for advice if you feel unwell.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it 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 CENTRE or doctor.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISONS CENTRE or doctor for advice if you feel unwell.

4.2 Symptoms caused by exposure

Unlikely to cause harmful effects under normal conditions of handling and use.

4.3 Medical attention and special treatment

Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray or fog, foam, CO2 or dry chemical as appropriate for surrounding materials. Contain extinguishing media to prevent runoff into drains, sewers, waterways.

5.2 Specific hazards arising from the chemical

Fire decomposition products may be toxic/harmful and/or irritating if inhaled.

Evacuate people to safe area upwind of fire.

5.3 Special protective equipment and precautions for fire fighters

Wear full personal protective equipment including with self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Have this SDS available. In the event of a spill, wear appropriate protective clothing and eye/hand protection. Wash contaminated personal protective equipment and clothing and dry before re-use.

6.2 Environmental precautions

Prevent spillage from entering drains or waterways. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

6.3 Methods and materials for containment and cleaning up

Contain spilled material. Collect granules for disposal. For small liquid spills, use absorbent material such as sand, soil, vermiculite and recover into labelled drums that can be sealed for safe disposal. For large liquid spills, recover liquid into labelled containers then absorb remaining liquid and transfer to drums for disposal. Clean area with water and detergent.

Dispose of contaminated materials to approved landfill in accordance with local regulations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Read the label before use.

Do not apply into or onto water.

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Use only outdoors or in well-ventilated area.

When applied product avoid inhalation of spray mist/aerosols. Wear protective equipment such as coat/trouser (overalls), boots, gloves and eye protection.
Wash hands and exposed skin with soap and water after handling and before rest or meal breaks.
Do not eat, drink or smoke when using.
Do not use spray equipment contaminated with this product for any other purpose unless first thoroughly cleaned with a suitable cleaning detergent.

7.2 Conditions for safe storage

Store securely in the closed original packaging out of reach of children and in a dry, cool, well-ventilated area and out of direct sunlight. Keep away from sources of heat, food, drink and animal feedstuffs.
Storage of 100 kg or more of this product requires an emergency response plan, secondary containment and signage.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters – exposure standards, biological monitoring

Ingredient	TWA (mg/m^3)	STEL (mg/m^3)
Copper	0.01 (dermal sensitiser)	

8.2 Engineering controls

Use outdoors or in a well-ventilated area.

8.3 Personal protective equipment (PPE)

The following Standards provide general advice regarding safety clothing and equipment: Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: **AS/NZS 4501**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Eye/Face Protection: Wear chemical splash goggles if eye contact is possible.

Skin Protection: Wear impervious chemical resistant gloves (e.g. nitrile, butyl), coveralls, socks and chemical resistant footwear. For overhead spray exposure, wear chemical resistant headgear. Ensure all skin areas are covered.

Respirator: Use outdoors in well-ventilated area or use local exhaust ventilation. Where product is being sprayed and a mist could be produced a respirator should be worn. It should be fitted with a cartridge, suitable for particulates.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Blue granules
Odour	None
Odour threshold	Not known
pH	7.0 – 10.0 (1% aqueous dispersion)
Melting/Freezing Point	No data available
Boiling Point /Range	No data available
Flash point	Non flammable
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	No data available
Vapour Pressure	No data available
Vapour density	No data available

Specific gravity/bulk density	c.a 0.71 g/cc
Solubility	Dispersible in water
Partition Co-efficient n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Not applicable
Particle characteristics	No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

This product is unlikely to react or decompose under normal storage conditions.

10.2 Chemical stability

Stable under normal temperatures and pressure for storage and use.

10.3 Conditions to Avoid

Avoid storage in direct sunlight or exposure to heat.

10.4 Incompatible materials and possible hazardous reactions

Incompatible with explosives, oxidising agents, organic peroxides

10.5 Hazardous decomposition products

Fire Decomposition: Smoke, carbon and nitrogen oxides and other unspecified compounds.

10.6 Polymerisation

Not known to occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Health hazard information

The product is classified for health hazards according to an assessment of information on product.

11.2 Toxicological information

Acute toxicity:	Classified as harmful if ingested.
Aspiration hazard:	Product contains no components with aspiration hazard.
Respiratory irritation:	May be slightly irritating.
Skin corrosion/irritation	Not classified.
Serious eye damage/irritation	Classified as causing serious eye damage.
Respiratory or skin sensitisation	Classified as a contact sensitiser.
Germ cell mutagenicity:	No ingredients in product identified as presumed or suspected mutagens.
Carcinogenicity	No ingredients in product identified as presumed or suspected carcinogens.
Reproductive toxicity	No ingredients in product identified suspected of damaging fertility or the unborn child.
Specific target organ toxicity – single/repeated exposure	Classified as having potential to damage organs (lungs) or systems through prolonged or repeated oral exposure.
Narcotic effects	Product contains no ingredient identified as causing narcotic effects.

11.3 Toxicological data:

Cupric hydroxide	Oral, LD_{50} (rat) 489 mg/kg bw

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

This product is classified as very toxic to aquatic life with long lasting effects and hazardous to terrestrial vertebrates.

12.2 Environmental Fate

Breakdown in soil and groundwater: DT_{50} >30 days.

Bioaccumulation: Low bioaccumulation potential.

Partition coefficient (octanol/water): Log P 0.44

Soil mobility: Cupric hydroxide is minimally soluble in water.

12.3 Ecotoxicity data:

Cupric hydroxide	Fish: Rainbow trout LC_{50} (96 hr) 0.017 mg/L Fathead minnow LC_{50} (96 hr) 0.023 mg/L Crustacea: *Daphnia spp* EC_{50} (48 h) 0.00065 mg/L Alga: *Pseudokirchneriella subcapitata* EC_{50} (72 hr) 0.009 mg/L Bird: *Colinus virginianus* LD_{50} 223 mg copper/kg

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product Disposal

Refer to product label. If possible, dispose of by using according to the label. Otherwise dispose of to a chemical recovery service or at an approved landfill in accordance with local regulations.

13.2 Container Disposal

Refer to product label. Do not use packaging for storage of other products. Empty packaging should be crushed and disposed of to an approved recycler or sent to approved landfill.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport:

Classified as Dangerous Good Class 9 according to NZS5433 Transport of Dangerous Goods on Land

Marine Transport (IMO/IMDG):

Classified as Dangerous Good Class 9 by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport (ICAO/IATA):

Classified as Dangerous Good Class 9 by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulation for transport by air.

UN Number:	3077
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS COPPER 30%)
Transport hazard class(es)	9
Packing Group:	III
HAZCHEM:	2Z
Special Precautions for User:	-
IMDG Marine pollutant:	YES
Transport in Bulk:	-

SECTION 15: REGULATORY INFORMATION

15.1 HSNO Act 1996

Hazardous substance according to Hazardous Substances (Classification) Notice 2020.

Approved substance number:	HSR000739
Hazard classifications:	Acute oral toxicity Category 4; Serious eye damage Category 1; Skin sensitisation Category 1; Specific target organ toxicity – repeated exposure Category 2; Hazardous to the aquatic environment acute Category 1; Hazardous to the aquatic environment chronic Category 1;
Controls:	Refer to control on www.epa.govt.nz for complete wording for variation Controls. Do not apply onto or into water.
Additional information:	Refer to HS Notices (www.epa.govt.nz) and HSW HS Regulations (www.worksafe.govt.nz)
Certified handler:	Not applicable
Tracking:	Not applicable
Qualifications:	A person mixing, loading, or applying this substance must be a suitably qualified or under the guidance of a suitably qualified person.
International Agreements:	Not applicable
Signage trigger quantity (Schedule 3):	100 kg
Emergency Response Plan trigger quantity (Schedule 5):	100 kg
Secondary Containment trigger quantity (Schedule 16):	100 kg
Record Keeping:	A record of application may be required in certain circumstances. Refer to section 48 of Hazardous Substances (Hazardous Property Controls) Notice 2017
Environmental exposure limits:	None set.
Tolerable exposure limits:	None set

15.2 ACVM Act 1997

Registration number: P8704 HORTCARE® Copper Hydroxide 300

Refer to www.foodsafety.govt.nz for registration conditions.

SECTION 16: OTHER INFORMATION

16.1 Date of preparation or last revision of SDS

SDS issued	7 November 2023
SDS supersedes	23rd December 2020
Reason issued	Update to GHS.

16.2 ABREVIATIONS

ADI	Acceptable Daily Intakes
CAS number	Chemical Abstracts Service Registry Number
CCID	Chemical Classification Identification Database
EPA	Environmental Protection Authority
ErC_{50}	Half maximal Effective Concentration

GHS	Globally Harmonized System of Classification and Labelling of Chemicals
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
HSNO	Hazardous Substances and New Organisms
HS	Health and Safety
HSR	Hazardous Substances Register
IARC	International Agency for Research on Cancer
LC_{50}	Median Lethal Concentration
LD_{50}	Median Lethal Dose
SDS	Safety Data Sheets
NOAEL	No Observable Adverse Effect Level
NOEL	No Observable Effect Level
NOS	Not otherwise specified
STEL	Short Term Exposure Limit
SWA	Safety Work Australia
TWA	Time-Weighted Average
UN Number	United Nations Number

16.3 REFERENCES

EPA CCID and Approved Substance databases

PPDB- Pesticides Properties DataBase

16.4 OTHER

Hortcare® is a trademark of Grosafe Chemicals Ltd

End of Safety Data Sheet