

Safety Data Sheet

according to WHS Regulations

Printing date 01.04.2021

Revision: 29.03.2021

1 Identification

Product Name: Optifert High Zinc Liquid Fertiliser

Recommended Use of the Chemical and Restriction on Use: Fertilizers

Details of Manufacturer or Importer:

Titan Ag
Suite 15/16 Princess Street
Newport NSW 2106

Phone Number: +61 2 9999 6655

Emergency telephone number: +61 418 615 823

Email: andrew@titanag.com.au

2 Hazard(s) Identification

Hazardous Nature:

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

Signal Word Warning

Hazard Statements

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P273 Avoid release to the environment.

P391 Collect spillage.

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

3 Composition and Information on Ingredients

Chemical Characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:

CAS: 1314-13-2	Zinc oxide ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	50-65%
CAS: 107-21-1	1,2-Ethanediol ⚠ Acute Toxicity (Oral) 4, H302; STOT SE 3, H335	5-7%
CAS: 2682-20-4	3-Isothiazolone, 2-methyl- ⚠ Acute Toxicity (Oral) 3, H301; Acute Toxicity (Dermal) 3, H311; Acute Toxicity (Inhalation) 2, H330; ⚠ Skin Corrosion/Irritation 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sensitisation 1A, H317	0.001-0.01%

4 First Aid Measures

Inhalation:

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.

(Contd. on page 2)

Safety Data Sheet

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Printing date 01.04.2021

Revision: 29.03.2021

Product Name: Optifert High Zinc Liquid Fertiliser

(Contd. of page 1)

Skin Contact:

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eye Contact:

In case of eye contact, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if symptoms occur.

Ingestion:

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give small quantities of water to drink. Never give anything by mouth to an unconscious person. Seek medical attention if symptoms occur.

Symptoms Caused by Exposure:

Inhalation: May cause respiratory irritation. Effects may be delayed.

Skin Contact: May cause an allergic skin reaction and skin irritation and redness.

Eye Contact: No adverse health effects expected.

Ingestion: No adverse health effects expected.

5 Fire Fighting Measures

Suitable Extinguishing Media: Use fire extinguishing methods suitable to surrounding conditions.

Specific Hazards Arising from the Chemical:

Hazardous combustion products include nitrogen oxides, metal oxides, ammonia.

Product is non flammable.

Containers close to fire should be removed only if safe to do so. Use water spray to cool fire exposed containers.

Prevent run-off from fire fighting entering drains or water courses.

HAZCHEM Code: •3Z

Special Protective Equipment and Precautions for Fire Fighters:

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots.

Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation.

Environmental Precautions:

In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material.

Collect the spilled material and place into a suitable container for disposal.

7 Handling and Storage

Precautions for Safe Handling:

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours.

Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:

Store in a cool, dry and well ventilated area. Keep container tightly closed. Protect from direct sunlight. Keep away from calcium hypochlorite or sodium hypochlorite. Avoid contamination by any source including metals, dust and organic materials. Ensure storage area has adequate spillage containment.

(Contd. on page 3)

Safety Data Sheet

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Printing date 01.04.2021

Revision: 29.03.2021

Product Name: Optifert High Zinc Liquid Fertiliser

(Contd. of page 2)

8 Exposure Controls and Personal Protection

Exposure Standards:**CAS: 107-21-1 1,2-Ethanediol**

WES	STEL: 104** mg/m ³ , 40** ppm TWA: 10* 52** mg/m ³ , 20** ppm Sk;*particulate;**vapour
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CAS: 1314-13-2 Zinc oxide (65%)

WES	STEL: 10** mg/m ³ TWA: 10* 5** mg/m ³ *dust **fume
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Engineering Controls:

Maintain air concentration below occupational exposure standards, providing adequate ventilation.

Respiratory Protection:

Use an approved vapour respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

Skin Protection:

Impervious chemical resistant gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information.

When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

9 Physical and Chemical Properties

Appearance:

Form:	Liquid (Suspension)
Colour:	White
Odour:	Odourless
Odour Threshold:	No information available
pH-Value (100 g/l) at 20 °C:	9
Melting point/freezing point:	-7 °C
Initial Boiling Point/Boiling Range:	100 °C
Flash Point:	No information available
Flammability:	Product is non flammable
Ignition Temperature	No information available
Auto-ignition Temperature:	No information available
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure:	No information available
Density:	1.734 g/cm ³

(Contd. on page 4)

Safety Data Sheet

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Revision: 29.03.2021

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(Contd. of page 3)

Relative Density:	No information available
Vapour Density:	No information available
Evaporation Rate:	No information available
Solubility in Water:	Miscible
Partition Coefficient (n-octanol/water):	No information available
Viscosity:	1,500 - 2,500 mPa·s (Dynamic)

10 Stability and Reactivity

Possibility of Hazardous Reactions:

Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.

Chemical Stability: Stable at ambient temperature and under normal conditions of storage and use.**Conditions to Avoid:** Avoid contamination by any source including metals, dust and organic materials.**Incompatible Materials:** Calcium hypochlorite or sodium hypochlorite.**Hazardous Decomposition Products:** Nitrogen oxides, metal oxides, ammonia.

11 Toxicological Information

Toxicity:**LD50/LC50 Values Relevant for Classification:****CAS: 1314-13-2 Zinc oxide**

Oral	LD50	>5,000 mg/kg (rat)
Inhalation	LC50/4 h	>5.7 mg/l (rat)

CAS: 107-21-1 1,2-Ethanediol

Oral	LD50	5,840 mg/kg (rat)
Dermal	LD50	9,530 mg/kg (rabbit)

Acute Health Effects**Inhalation:** May cause respiratory irritation. Effects may be delayed.**Skin:** May cause an allergic skin reaction and skin irritation and redness.**Eye:** No adverse health effects expected.**Ingestion:** No adverse health effects expected.**Skin Corrosion / Irritation:** Based on classification principles, the classification criteria are not met.**Serious Eye Damage / Irritation:** Based on classification principles, the classification criteria are not met.**Respiratory or Skin Sensitisation:** Based on classification principles, the classification criteria are not met.**Germ Cell Mutagenicity:** Based on classification principles, the classification criteria are not met.**Carcinogenicity:** This product does NOT contain any IARC listed chemicals.**Reproductive Toxicity:** Based on classification principles, the classification criteria are not met.**Specific Target Organ Toxicity (STOT) - Single Exposure:**

Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Based on classification principles, the classification criteria are not met.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.**Chronic Health Effects:** No data associated with long term health effects.

(Contd. on page 5)

Safety Data Sheet

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Revision: 29.03.2021

Product Name: Optifert High Zinc Liquid Fertiliser

(Contd. of page 4)

12 Ecological Information

Ecotoxicity:**Aquatic toxicity:**

Very toxic to aquatic life with long lasting effects.

CAS: 1314-13-2 Zinc oxide

EC50/48 h	6.9-16.2 mg/l (daphnia)
EC50/72 h	0.136 mg/l (selenastrum capricornutum)
LC50/96 h	2,246 mg/l (fathead minnow)
	0.33-0.78 mg/l (rainbow trout)

CAS: 107-21-1 1,2-Ethanediol

EC50/48 h	49,000 mg/l (daphnia)
EC50/96 h	6,500-13,000 mg/l (green algae)
LC50/96 h	22,810 mg/l (rainbow trout)

CAS: 2682-20-4 3-Isothiazolone, 2-methyl-

EC50/48 h	0.18 mg/l (daphnia)
LC50/96 h	0.07 mg/l (rainbow trout)

Persistence and Degradability: No data available on finished product.**Bioaccumulative Potential:** No data available on finished product.**Mobility in Soil:** No data available on finished product.**Other adverse effects:** No further relevant information available.

13 Disposal Considerations

Disposal Methods and Containers:

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Dispose according to applicable local and state government regulations.

Special Precautions for Landfill or Incineration:

Please consult your state Land Waste Management Authority for more information.

14 Transport Information

UN Number	
ADG, IMDG, IATA	UN3082
Proper Shipping Name	
ADG, IMDG, IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Dangerous Goods Class	
ADG Class:	9 Miscellaneous dangerous substances and articles.
Subsidiary Risk:	
Packing Group:	
ADG, IMDG, IATA	III
Marine pollutant:	Yes
EMS Number:	F-A,S-F
Hazchem Code:	•3Z

(Contd. on page 6)

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(Contd. of page 5)

Special Provisions: 274, 331, 335, 375, AU01**Limited Quantities:** 5L**Packagings & IBCs - Packing Instruction:** P001, IBC03, LP01**Packagings & IBCs - Special Packing Provisions:** PP1**Portable Tanks & Bulk Containers - Instructions:** T4**Portable Tanks & Bulk Containers - Special Provisions:** TP1, TP29

15 Regulatory Information

Australian Inventory of Industrial Chemicals:

All ingredients are listed.

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Poison Schedule:

Poisons Schedule: 6

Australia: Priority Existing Chemicals

None of the ingredients is listed.

16 Other Information

Date of Preparation or Last Revision: 29.03.2021**Prepared by:** MSDS.COM.AU Pty Ltdwww.msds.com.au

Abbreviations and acronyms:

ADG: Australian Dangerous Goods

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Acute Toxicity (Oral) 3: Acute toxicity - oral – Category 3

Acute Toxicity (Oral) 4: Acute toxicity - oral – Category 4

Acute Toxicity (Inhalation) 2: Acute toxicity - inhalation – Category 2

Skin Corrosion/Irritation 1B: Skin corrosion/irritation – Category 1B

Skin Sensitisation 1A: Skin sensitisation, Hazard Category 1A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1

Disclaimer

This SDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - July 2020"

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