

**SAFETY DATA SHEET****PRODUCT: OPTIMUM GLUCO ZN**

Date of issue: 10/03/22

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Version: 1.001

**1. PRODUCT INFORMATION**

1.1 Product Identifier:	Optimum Gluco Zn
1.2 Relevant uses:	Fertilizer
1.3 Supplier details:	
<b>Company Details</b>	
<b>Name:</b> Ad Terram Treatment Technologies B.V.	<b>Emergency Tel. No.</b> +31(0)228 593813 (after hours)
<b>Address:</b> De Veken 106, 1716 KG, Opmeer	<b>Postal Address:</b> De Veken 106, 1716 KG, Opmeer
Tel. No. +31 (0)228 593813	E-mail Address: info@ad-terram.nl

**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture:**

In accordance with Regulation (EU) No 1272/2008: Aquatic Chronic 2 : Toxic to aquatic life with long lasting effects. Eye Dam. 1 : Causes serious eye damage.

**2.2 Label elements:**

Pictograms:



Signal Word:

**Danger**

H statements:

H318 Causes serious eye damage.

H411 Toxic to aquatic life with long lasting effects.



## P statements:

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

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 CENTER/doctor/...

P391 Collect spillage.

P501 Dispose of contents/container to ...

## Contains:

zinc sulfate heptahydrate

**2.3 Other hazards:**

Potential Acute Health Effects:	None
Health Effects – Inhalation:	None
Carcinogenicity:	No Data Available
Mutagenicity:	No Data Available
Neurotoxicity:	No Data Available

**3. COMPOSITION****3.1 Substances**

Not Applicable.

**3.2 Mixtures**

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:



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Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	specific concentration limit
CAS No: 7446-20-0	zinc sulfate heptahydrate	3 - 25 %	Acute Tox. 4, H302 - Aquatic Acute 1, H400 - Aquatic Chronic 1, H410 - Eye Dam. 1, H318	-
Index No: 007-001-01-2 CAS No: 1336-21-6 EC No: 215-647-6	ammonia.%	0.1 - 1 %	Aquatic Acute 1, H400 - Skin Corr. 1B, H314	STOT SE 3, H335: C ≥ 5 %

(\*) The complete text of the H phrases is given in section 16 of this Safety Data Sheet.

**4. FIRST AID MEASURES**

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

**4.1 First aid measures**

Product In Eye:	Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance. Don't let the person to rub the affected eye.
Product On Skin:	Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.
Product Ingested:	If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting
Product Inhalation:	Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration

**4.2 Most important symptoms and effects, both acute and delayed**

Corrosive Product, contact with eyes or skin can cause burns; ingestion or inhalation can cause internal damage, if this occurs immediate medical assistance is required.

Contact with eyes may cause irreversible damage.

**4.3 Indication of any immediate medical attention and special treatment needed**


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Request immediate medical attention. Never administer anything orally to persons who are unconscious. Do not induce vomiting. If the person vomits, clear the respiratory tract. Cover the affected area with a dry sterile bandage. Protect the affected area from pressure or friction.

**5. FIRE FIGHTING MEASURES**

The product does not present any particular risk in case of fire.

<b>5.1 Extinguishing Media</b> Suitable media:	Extinguisher powder or CO2. In case of more serious fires, also alcohol-resistant foam and water spray.
Unsuitable media:	Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media
<b>5.2 Special hazards</b>	
<b>Special risks:</b>	Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.
<b>5.3 Advice for firefighters</b>	
	Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways. Product residues and extinguishing media may contaminate the aquatic environment.
<b>Protective Clothing:</b>	According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

**6. ACCIDENTAL RELEASE MEASURES**

<b>6.1 Personal Precautions:</b>	For exposure control and individual protection measures, see section 8.
<b>6.2 Environmental Precautions:</b>	Product dangerous for the environment, in case of large spills or if the product contaminates lakes, rivers, or



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	sewers, inform the responsible authorities according to local legislation. Prevent the contamination of drains, surface or subterranean waters, and the ground. Prevent entry into basements or confined areas.
6.3 Methods and materials for containment and cleaning up:	Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant. Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations.
6.4 Reference to other sections:	For exposure control and individual protection measures, see section 8. For later elimination of waste, follow the recommendations under section 13.

**7. HANDLING AND STORAGE**

7.1 Precautions for safe handling:	For personal protection, see section 8. In the application area, smoking, eating, and drinking must be prohibited. Follow legislation on occupational health and safety. Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.
7.2 Conditions for safe storage:	Store according to local legislation. Observe indications on the label. Store the containers between 5 and 25° C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorised persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills. The product is not affected by Directive 2012/18/EU (SEVESO III).
7.3 Specific end use	Not available.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

8.1 Control Parameters:	
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Occupational Exposure Limits:	The product does NOT contain substances with Professional Exposure Environmental Limit Values. The product does NOT contain substances with Biological Limit Values.
8.2 Exposure Controls.	

**Measures of a technical nature:**

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

<b>Concentration:</b>	<b>100 %</b>		
<b>Uses:</b>	<b>FERTILIZER</b>		
<b>Breathing protection:</b>			
PPE:	Filter mask for protection against gases and particles.		
Characteristics:	«CE» marking, category III. The mask must have a wide field of vision and an anatomically designed form in order to be sealed and watertight.		
CEN standards:	EN 136, EN 140, EN 405		
Maintenance:	Should not be stored in places exposed to high temperatures and damp environments before use. Special attention should be paid to the state of the inhalation and exhalation valves in the face adaptor. Read carefully the manufacturer's instructions regarding the equipment's use and maintenance. Attach the necessary filters to the equipment according to the specific nature of the risk (Particles and aerosols: P1-P2-P3, Gases and vapours: A-B-E-K-AX), changing them as advised by the manufacturer.		
Observations:	Filter Type needed: A2		
<b>Hand protection:</b>			
PPE:	Work gloves.		
Characteristics:	«CE» marking, category I.		
CEN standards:	EN 374-1, En 374-2, EN 374-3, EN 420		
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.		
Observations:	Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands.		
Material:	PVC (polyvinyl chloride)	Breakthrough time (min.):	> 480
		Material thickness (mm):	0,35
<b>Eye protection:</b>			
PPE:	Protective goggles with built-in frame.		
Characteristics:	«CE» marking, category II. Eye protector with built-in frame for protection against dust, smoke, fog and vapour.		
CEN standards:	EN 165, EN 166, EN 167, EN 168		
Maintenance:	Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions.		
Observations:	Some signs of wear and tear include: yellow colouring of the lenses, superficial scratching of the lenses, scraping etc.		
<b>Skin protection:</b>			
PPE:	Protective clothing.		
Characteristics:	«CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.		
CEN standards:	EN 340		
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.		
Observations:	The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.		

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PPE:	Work footwear.
Characteristics:	«CE» marking, category II.
CEN standards:	EN ISO 13287, EN 20347
Maintenance:	This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people.
Observations:	Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident

**9. PHYSICAL AND CHEMICAL PROPERTIES**
**9.1 Information on basic physical and chemical properties**

Appearance:	Liquid
Colour:	Brown
Odour:	N.A./N.A
Odour threshold:	N.A./N.A
pH:	6-7 (10%)
Melting point:	N.A./N.A
Boiling point:	N.A./N.A
Flash point:	> 60 °C
Evaporation rate:	N.A./N.A
Inflammability (solid, gas)	N.A./N.A
Lower Explosive Limit:	N.A./N.A
Upper Explosive Limit:	N.A./N.A
Vapour pressure:	N.A./N.A
Vapour density:	N.A./N.A
Relative density:	1.20
Solubility:	N.A./N.A
Lip solubility:	N.A./N.A
Hydrosolubility:	N.A./N.A
Partition coefficient (n-octanol/water):	N.A./N.A
Auto-ignition temperature:	N.A./N.A
Decomposition temperature:	N.A./N.A
Viscosity:	N.A./N.A
Explosive properties:	N.A./N.A
Oxidizing properties:	N.A./N.A

N.A./N.A.= Not Available/Not Applicable due to the nature of the product

**9.2 Other information.**

Dropping point: N.A./N.A.

Blink: N.A./N.A.



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Kinematic viscosity: N.A./N.A.

N.A./N.A.= Not Available/Not Applicable due to the nature of the product

**10. STABILITY AND REACTIVITY**

10.1 Reactivity:	The product does not present hazards by their reactivity
10.2 Chemical Stability:	Stable under the recommended handling and storage conditions (see section 7).
10.3 Possibility of hazardous reactions	The product does not present possibility of hazardous reactions.
10.4 Conditions To Avoid:	Avoid any improper handling
10.5 Incompatible materials	Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions
10.6 Hazardous decomposition products	No decomposition if used for the intended uses.

**11. TOXICOLOGICAL INFORMATION**
**11.1 Information on toxicological effects**

There are no tested data available on the product. Splatters in the eyes can cause irritation and reversible damage.

Acute Toxicity:	Not conclusive data for classification
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Acute Toxicity Estimate (ATE):

Mixtures:

ATE (Oral) = 8.227 mg/kg

b) skin corrosion/irritation;

Based on available data, the classification criteria are not met.

c) serious eye damage/irritation;

Product classified:

Serious eye damage, Category 1: Causes serious eye damage.

d) respiratory or skin sensitisation;

Not conclusive data for classification.

e) germ cell mutagenicity;

Not conclusive data for classification.





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f) carcinogenicity;  
Not conclusive data for classification.

g) reproductive toxicity;  
Not conclusive data for classification.

h) STOT-single exposure;  
Not conclusive data for classification.

i) STOT-repeated exposure;  
Not conclusive data for classification.

j) aspiration hazard;  
Not conclusive data for classification.

**12. ECOLOGICAL INFORMATION**

12.1 Ecotoxicity:	No information is available regarding the ecotoxicity of the substances present.
12.2 Persistence and biodegradability:	No information is available regarding the biodegradability of the substances present.  No information is available on the degradability of the substances present.No information is available about persistence and degradability of the product.
12.3 Bioaccumulative potential:	No information is available regarding the bioaccumulation of the substances present.
12.4 Mobility in soil:	No information is available about the mobility in soil. The product must not be allowed to go into sewers or waterways. Prevent penetration into the ground.
12.5 Results of PBT and vPvB assessment:	No information is available about the results of PBT and vPvB assessment of the product.
12.6 Other adverse effects	No information is available about other adverse effects for the environment.

**13. DISPOSAL CONSIDERATION**


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13.1 Waste treatment methods:

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation. Follow the provisions of Directive 2008/98/EC regarding waste management.

**14. TRANSPORT INFORMATION**

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Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA

for air transport.

Land: Transport by road: ADR, Transport by rail: RID.

Transport documentation: Consignment note and written instructions

Sea: Transport by ship: IMDG.

Transport documentation: Bill of lading

Air: Transport by plane: ICAO/IATA.

Transport document: Airway bill.

**14.1 UN number.**

UN No: UN3082

**14.2 UN proper shipping name.**

Description:

ADR: UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS ZINC SULFATE HEPTAHYDRATE),

9, PG III, (-)

IMDG: UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS ZINC SULFATE HEPTAHYDRATE),

9, PG III, MARINE POLLUTANT

ICAO/IATA: UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS ZINC SULFATE

HEPTAHYDRATE), 9, PG III

**14.3 Transport hazard class(es).**

Class(es): 9

**14.4 Packing group.**

Packing group: III

#### 14.5 Environmental hazards.

Marine pollutant: Yes



Dangerous for the environment

#### 14.6 Special precautions for user.

Labels: 9



Hazard number: 90

ADR LQ: 5 L

IMDG LQ: 5 L

ICAO LQ: 30 kg B

Provisions concerning carriage in bulk ADR: Not authorized carriage in bulk in accordance with ADR.

Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): F-A,S-F

Proceed in accordance with point 6.

#### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code.

The product is not transported in bulk.

## 15. REGULATORY INFORMATION



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<p>15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture:</p>	<p>The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer. Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): N/A</p> <p>The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.</p> <p>The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.</p>
<p>15.2 Chemical Safety assessment</p>	<p>No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.</p>

**16. OTHER INFORMATION**
**Complete text of the H phrases that appear in section 3:**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Classification codes:**

Acute Tox. 4 : Acute toxicity (Oral), Category 4

Aquatic Acute 1 : Acute toxicity to the aquatic environment, Category 1

Aquatic Chronic 1 : Chronic effect to the aquatic environment, Category 1

Aquatic Chronic 2 : Chronic effect to the aquatic environment, Category 2

Eye Dam. 1 : Serious eye damage, Category 1

Skin Corr. 1B : Skin Corrosive, Category 1B

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

Physical hazards                      On basis of test data

Health hazards                        Calculation method

Environmental hazards              Calculation method



It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Abbreviations and acronyms used:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

CEN: European Committee for Standardization.

PPE: Personal protection equipment.

IATA: International Air Transport Association.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Code for Dangerous Goods.

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current

legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.

**17. PREPARED BY**

Carla Meijles

