1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name: Zinc sulphate, Glycine (Zn) 26%

Relevant identified uses of the substance or mixture and uses advised against

General use: Fertilizer.
Reserved for industrial and professional use.

Details of the supplier of the safety data sheet

Company name: Phytoplanta GmbH
Street/POB-No.: Fürschlag 3
Postal Code, city: 91564 Neuendettelsau
Country: Germany
WWW: www.phytoplanta.com
E-mail: info@phytoplanta.com
Telephone: +49 9874 50482825

Department responsible for information:
Telephone: +49 9874 50482825
E-mail: reach.phytoplanta@phytoplanta.com

Additional information: Distributor:
PHYTOPLANTA ASIA CO.,LTD.
141 Innovation Cluster 2 Tower D, Thailand Science Park,
Room No. INC2D-304, 3rd Floor, Moo.9, Phahonyothin Rd.
Klong Nueng, Klong Luang, Pathum Tani, 12120
Telephone: +66 2 6942498
Telefax: +66 2 6942499
Mobile Tel.: +66985195866
E-mail: n.champa@phytoplanta.com

Emergency telephone number

Telephone:
CHEMTREC (contract no. CCN 1015354) 1800014808 (Toll free) - This phone number is not guaranteed from payphones within Thailand and is not available from phones outside Thailand

APAC Singapore +65 3163 8374 (Asia, South Asia, and Oceania)

2. Hazards identification

Classification of the substance or mixture

GHS classification

Aquatic Acute 1 Very toxic to aquatic life.
Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.

Label elements

Hazard symbols:

Signal word: **Warning**

Hazard statements: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

Collect spillage.

Dispose of contents/container to hazardous or special waste collection point.

Other hazards

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

3. Composition/information on ingredients

Substances

Chemical characterisation: $C_2H_5NO_6SZn \cdot H_2O$
Zinc monoglycinate sulfate hydrate, > 95 % (w/w)
2-aminoacetate, hydron, zinc(2+) sulfate hydrate

CAS-Number: 2917586-55-9

4. First aid measures

General information: If medical advice is needed, have product container or label at hand.
Take off contaminated clothing and wash it before reuse.

In case of inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

Following skin contact: Immediately clean with water and soap followed by thorough rinsing. In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical aid in case of troubles.

After swallowing: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Seek medical attention.

Most important symptoms and effects, both acute and delayed

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Firefighting measures

Extinguishing media

Suitable extinguishing media:

Water spray jet, foam, extinguishing powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

Full water jet

Special hazards arising from the substance or mixture

May form dangerous gases and vapours in case of fire.
Furthermore, there may develop: Zinc oxide, nitrogen oxides, sulphur oxides, carbon monoxide and carbon dioxide.

Advice for firefighters

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information: Use fine water spray to cool endangered containers. Do not allow water used to extinguish fire to enter drains, ground or waterways. Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust. Avoid contact with the substance.
If possible, eliminate leakage. Provide adequate ventilation.
Wear appropriate protective equipment. Keep unprotected people away.
Take off contaminated clothing and wash it before reuse.

Environmental precautions

Do not allow to enter into ground-water, surface water or drains.
In case of release, notify competent authorities.

Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

7. Handling and storage

Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid generation of dust. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse.
Have eye wash bottle or eye rinse ready at work place.

Precautions against fire and explosion:

Usual measures for fire prevention.

Storage

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place.
Keep container dry. Keep only in the original container.
Protect from heat and direct sunlight.

Hints on joint storage: Keep away from food, drink and animal feedingstuffs.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values:

Type	Limit value
USA: ACGIH: TWA	10 mg/m³ (Dust limit value, inhalable fraction)
USA: ACGIH: TWA	3 mg/m³ (Dust limit value, respirable fraction)

Exposure controls

Provide good ventilation and/or an exhaust system in the work area.
In the case of the formation of dust: Dust should be exhausted directly at the point of origin.
See also information in chapter 7, section storage.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded.
In case of dust formation: Particulates filter P2 according to EN 143.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

Hand protection: Protective gloves according to DIN EN ISO 374:1.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to DIN EN ISO 16321-1:2022.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:
Avoid generation of dust. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse. Have eye wash bottle or eye rinse ready at work place.

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance: Physical state at 20 °C and 101.3 kPa: solid
Form: granulate
Colour: white

Odour: odourless

Odour threshold: No data available

pH: at 20 °C: 3.6 (saturated solution)

Melting point/freezing point: approx. 298 °C

Initial boiling point and boiling range: Decomposition

Flash point/flash point range: Not applicable

Evaporation rate: No data available

Flammability:	Non-flammable
Explosion limits:	LEL (Lower Explosion Limit): Not applicable UEL (Upper Explosive Limit): Not applicable
Vapour pressure:	No data available
Vapour density:	No data available
Density:	No data available
Water solubility:	at 20 °C: 520 g/L
Partition coefficient: n-octanol/water:	-3.21 log K(o/w) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
Auto-ignition temperature:	No data available
Thermal decomposition:	> 298 °C

Additional information

Viscosity:	No data available
Bulk density:	1058 g/L

10. Stability and reactivity

Reactivity: Refer to subsection "Possibility of hazardous reactions".

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions:
No hazardous reaction when handled and stored according to provisions.

Conditions to avoid: Protect from heat and direct sunlight. Protect from moisture contamination.

Incompatible materials: No data available

Hazardous decomposition products:
No hazardous decomposition products when regulations for storage and handling are observed.

Thermal decomposition: > 298 °C

11. Toxicological information

Information on toxicological effects

Acute toxicity: LD50 Rat, oral: 2200 mg/kg bw (OECD425)

Toxicological effects:

Acute toxicity (oral): Based on available data, the classification criteria are not met.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Not classified (OECD 439)

Serious eye damage/irritation: Based on available data, the classification criteria are not met.
Specific symptoms in animal studies, bovine eye/corneal: Not classified (OECD 437)

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Based on available data, the classification criteria are not met.
Specific symptoms in animal studies (Guinea pig): not sensitising (OECD 429)

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.
Salmonella typhimurium: negative (OECD 471).
Genotoxicity in-vivo (Drosophila, Mouse, Rat): negative (Literature)

Carcinogenicity: Lack of data.

Reproductive toxicity: Based on available data, the classification criteria are not met.
NOAEL, Rat: 467 mg/kg bw/d (Literature)

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

Symptoms

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

12. Ecological information

Toxicity

Aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

Fish toxicity:
LC50, Oncorhynchus mykiss: 0.55 mg/L/96h
NOEC, Oncorhynchus mykiss: 0.74 mg/L/30d
Daphnia toxicity:
LC50, Daphnia magna (Big water flea): 8.10 mg/L/48h (OECD 202)
NOEC, Daphnia magna (Big water flea): 0.34 mg/L/21d (EU RAR)
Algae toxicity:
EC50, Pseudokirchneriella subcapitata (green algae): 0.29 mg/L/72h (OECD 201)
EC10, Pseudokirchneriella subcapitata (green algae): 0.157 mg/L/72h (OECD 201)
NOEC, Pseudokirchneriella subcapitata (green algae): 0.10 mg/L/72h (OECD 201)

Effects in sewage plants: EC50, activated sludge: 426.73 mg/L/3h

Persistence and degradability

Further details: No data available

Mobility in soil

No data available

Additional ecological information

General information: Do not allow to enter into ground-water, surface water or drains.

13. Disposal considerations

Waste treatment methods

Product

Recommendation: Dispose of waste according to applicable legislation.
Do not dispose of with household waste.

Package

Recommendation: Dispose of waste according to applicable legislation.
Handle contaminated packages in the same way as the substance itself.

14. Transport information

UN number

ADR/RID, IMDG, IATA-DGR:
UN 3077

Sea transport (IMDG)

UN number:	UN 3077
Proper shipping name::	UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc glycinate sulfate hydrate)
Class or division, Subsidary risk:	Class 9, Subrisk -
Packing Group:	III
EmS:	F-A, S-F
Special Provisions:	274 335 966 967 969
Limited quantities:	5 kg
Excepted quantities:	E1
Package - Instructions:	P002, LP02
Package - Provisions:	PP12
IBC - Instructions:	IBC08
IBC - Provisions:	B3
Tank instructions - IMO:	-
Tank instructions - UN:	T1, BK2, BK2, BK3
Tank instructions - Provisions:	TP33
Stowage and handling:	Category A. SW23
Properties and observations:	-
Marine pollutant:	yes
Segregation group:	none

Air transport (IATA)

UN/ID number:	UN 3077
Proper shipping name::	UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc glycinate sulfate hydrate)
Class or division, Subsidary risk:	Class 9
Packing Group:	III
Hazard label:	Miscellaneous & Environmentally hazardous
Excepted Quantity Code:	E1
Passenger and Cargo Aircraft: Ltd.Qty.:	Pack.Instr. Y956 - Max. Net Qty/Pkg. 30 kg G
Passenger and Cargo Aircraft:	Pack.Instr. 956 - Max. Net Qty/Pkg. 400 kg
Cargo Aircraft only:	Pack.Instr. 956 - Max. Net Qty/Pkg. 400 kg
Special Provisions:	A97 A158 A179 A197 A215
Emergency Response Guide-Code (ERG):	9L

15. Regulatory information

National regulations - Thailand

No data available

Further regulations, limitations and legal requirements

No data available

16. Other information

Abbreviations and acronyms:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
Aquatic Acute: Hazardous to the aquatic environment - acute
Aquatic Chronic: Hazardous to the aquatic environment - chronic
AS/NZS: Australian Standards/New Zealand Standards
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
EC: European Community
EC50: Effective Concentration 50%
EN: European Standard
EQ: Excepted quantities
IATA: International Air Transport Association
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
LD50: Lethal dose 50%
LEL: Lower Explosion Limit
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
NOAEL: No Observed Adverse Effect Level
NOEC: No Observed Effect Concentration
OEL: Occupational Exposure Limit Value
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances
UN: United Nations
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

Reason of change: Changes in section 1: Other trade names
Date of first version: 6/2/2023

Department issuing data sheet

Contact person: see section 1: Department responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations. Users should be aware of the potential risks associated with unintended use. Therefore the product should be used with caution.

Most recent product information is available at:
http://sumdat.net/ts679sgc