

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

Product identifier

Trade name: Green On Yield

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
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Department responsible for information:
Telephone: +49 9874 50482825
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Additional information: Distributor:
PHYTOPLANTA ASIA CO.,LTD.
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Telephone: +66 2 6942498
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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

Skin Irrit. 2 Causes skin irritation.
Eye Dam. 1 Causes serious eye damage.
Repr. 1B May damage fertility. May damage the unborn child.
Aquatic Acute 1 Very toxic to aquatic life.
Aquatic Chronic 2 Toxic to aquatic life with long lasting effects.

Label elements

Hazard symbols:



Signal word:

Danger

Hazard statements:

Causes skin irritation.
Causes serious eye damage.
May damage fertility. May damage the unborn child.
Very toxic to aquatic life with long lasting effects.

Precautionary statements:

Obtain special instructions before use.
Wear protective gloves/protective clothing/eye protection.

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 CENTER/doctor.
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

Mixtures

Hazardous ingredients:

CAS No.	Designation	Content	Classification
CAS 2917586-55-9	Zinc monoglycinate sulfate hydrate	35 - 40 %	Aquatic Acute 1. Aquatic Chronic 3.
CAS 10043-52-4	Calcium chloride	25 - 30 %	Eye Irrit. 2A.
CAS 52139-31-8	Manganese monoglycinate sulfate	15 - 20 %	Skin Irrit. 2.
CAS 10043-35-3	Boric acid	10 - 15 %	Repr. 1B.
CAS 2917586-53-7	Copper glycinate sulfate dihydrate	5 - 10 %	Acute Tox. 4 (oral). Skin Irrit. 2. Eye Dam. 1. Aquatic Acute 1. Aquatic Chronic 1.

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.
First aider: Pay attention to self-protection!

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 the attention of an ophthalmologist immediately.
- 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

Causes serious eye damage. Causes skin irritation.

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: metal oxide smoke, 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 exposure. 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.

If necessary notify appropriate 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: Obtain special instructions before use. 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.
Work place should be equipped with a shower and an eye rinsing apparatus.

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:

CAS No.	Designation	Type	Limit value
10043-35-3	Green On Yield	USA: ACGIH: TWA	10 mg/m ³ (Dust limit value, inhalable fraction)
		USA: ACGIH: TWA	3 mg/m ³ (Dust limit value, respirable fraction)
	Boric acid	USA: ACGIH: STEL	6 mg/m ³ (inhalable fraction)
		USA: ACGIH: TWA	2 mg/m ³ (inhalable fraction)

Exposure controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment.

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: In case of dust formation: Particulates filter P2 according to EN 143.
Respiratory protection must be worn whenever the WEL levels have been exceeded.
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:

Obtain special instructions before use. 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. Work place should be equipped with a shower and an eye rinsing apparatus.

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, blue
Odour:	neutral
Odour threshold:	No data available
pH:	at 5 g/L: 3.2 (water, demineralized)
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	Not applicable
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Density:	No data available
Water solubility:	soluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available

Additional information

Viscosity:	No data available
Explosive properties:	The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.
Bulk density:	900 - 1200 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: No data available

11. Toxicological information

Information on toxicological effects

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

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

ATEmix (calculated): > 2,000 mg/kg

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

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

Skin corrosion/irritation: Skin Irrit. 2 = Causes skin irritation.

Serious eye damage/irritation: Eye Dam. 1 = Causes serious eye damage.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Lack of data.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Repr. 1B = May damage fertility. May damage the unborn child.

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.

Other information: Information about Zinc monoglycinate sulfate hydrate:
LD50 Rat, oral: 2,200 mg/kg bw

Information about Manganese monoglycinate sulfate:
LD50 Rat, oral: 2,000 - 5,000 mg/kg (OECD 425)

Information about Boric acid:
LD50 Rat, oral: 3,765 mg/kg
LD50 Rabbit, dermal: > 2,000 mg/kg

Information about Copper glycinate sulfate dihydrate:
LD50 Rat, oral: 1,532 mg/kg (OECD 425)

Symptoms

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

After eye contact: Upon direct contact with eyes may cause burning, tearing, redness.

12. Ecological information

Toxicity

Aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

Information about Manganese monoglycinate sulfate:

Fish toxicity:

LC50, Caspian white fish: 224 mg/L/96h (comparable to OECD 203)

Daphnia toxicity:

EC50, Daphnia magna (Big water flea): 142 mg/L/48h (OECD 202)

Algae toxicity:

EC50, Pseudokirchneriella subcapitata (green algae): 61.4 mg/L/72h (OECD 201)

Information about Zinc glycinate sulfate hydrate:

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)

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.

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, Copper glycinate sulfate dihydrate)
Class or division, Subsidiary 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, Copper glycinate sulfate dihydrate)
Class or division, Subsidiary 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

Calcium chloride
Text for labelling: Contains Boric acid.
Restricted to professional users.

Abbreviations and acronyms:

Acute Tox.: Acute toxicity
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
Eye Dam.: Eye damage
Eye Irrit.: Eye irritation
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
LC50: Median lethal concentration
LD50: Lethal dose 50%
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
NOEC: No Observed Effect Concentration
OECD: Organisation for Economic Co-operation and Development
OEL: Occupational Exposure Limit Value
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.: Reproductive toxicity
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
Skin Irrit.: Skin irritation
SVHC: Substance of very high concern
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: **16/1/2024**

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/dcwb60fy>

