SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Green On® Cereals

Other trade names:
Green On® Getreide (DE)
Green On® Obilniny (CZ)
Green On® Cereales (ES)
Green On® Céréales (FR)
Green On® Kalászos (HU)
Green On® Granen (NL)
Green On® Obilniny (SK)

UFI: 6C0R-6WE3-3J97-N9N9

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

General use: Fertilizer

Reserved for industrial and professional use.

1.3 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

1.4 Emergency telephone number

International Poisons Information Service/Transportation emergency call:
CHEMTREC (contract no. CCN 1015354), 24h: +44 20 3885 0382 (EMEA)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Skin Irrit. 2; H315	Causes skin irritation.
Eye Dam. 1; H318	Causes serious eye damage.
Aquatic Acute 1; H400	Very toxic to aquatic life.
Aquatic Chronic 2; H411	Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (CLP)

Hazard symbols:

Signal word: **Danger**

Hazard statements:

H315	Causes skin irritation.
H318	Causes serious eye damage.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P264	Wash hands and face thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face 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 hazardous or special waste collection point.

Special labelling

Text for labelling: Contains: Copper glycinate sulfate dihydrate.

2.3 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.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

This product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% (w/w) or higher. The product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Hazardous ingredients:

Identifiers	Designation Classification	Content
REACH 01-2120856527-44-xxxx list no. 838-538-0 CAS 52139-31-8	Manganese monoglycinate sulfate Skin Irrit. 2; H315.	50 - 75 %
REACH 01-2120932679-40-xxxx CAS 2917586-55-9	Zinc monoglycinate sulfate hydrate Aquatic Acute 1; H400. Aquatic Chronic 3; H412.	25 - 50 %
REACH 01-2120932680-57-xxxx CAS 2917586-53-7	Copper glycinate sulfate dihydrate Acute Tox. 4; H302. Skin Irrit. 2; H315. Eye Dam. 1; H318. Aquatic Acute 1; H400. Aquatic Chronic 1; H410.	< 25 %
REACH 01-2119457026-42-xxxx EC No. 201-069-1 CAS 77-92-9	Citric acid, anhydrous Eye Irrit. 2; H319. STOT SE 3; H335.	< 5 %

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of 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. Seek medical attention if problems persist.

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. Subsequently seek the immediate attention of an ophthalmologist.

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.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye damage. Causes skin irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
It can take hours before symptoms of poisoning show up following exposure.

SECTION 5: Firefighting measures

5.1 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

5.2 Special hazards arising from the substance or mixture

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

5.3 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.

SECTION 6: Accidental release measures

6.1 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.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains.
If necessary, notify appropriate authorities.

6.3 Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid generation of dust. Do not breathe dust. Avoid contact with the substance. 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.

7.2 Conditions for safe storage, including any incompatibilities

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.
Do not store together with:
Strong acids, strong bases, oxidizing agents.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

PNEC: Information about Citric acid:

PNEC water (freshwater): 0.44 mg/L
PNEC water (marine water): 0.044 mg/L
PNEC sediment (freshwater): 34.6 mg/kg dw
PNEC sediment (marine water): 3.46 mg/kg dw
PNEC soil: 33.1 mg/kg dw
PNEC sewage treatment plant: 1,000 mg/L
PNEC sediment (freshwater): 7.52 mg/kg wet weight
PNEC sediment (marine water): 0.752 mg/kg wet weight
PNEC soil: 29.2 mg/kg wet weight

8.2 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.

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 EN ISO 374-1.
Glove material: rubber gloves.
Layer thickness: 0.5 mm.
Breakthrough time: 480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

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

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:

Avoid generation of dust. Do not breathe dust. Avoid contact with the substance. 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 "6.2 Environmental precautions".

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state at 20 °C and 101.3 kPa	solid Form: microgranulate
Colour:	white, blue
Odour:	Neutral
Melting point/freezing point:	No data available
Boiling point:	No data available
Flammability:	No data available
Lower and upper explosion limit:	Not applicable
Flash point:	Not applicable
Auto-ignition temperature:	Not applicable
Decomposition temperature:	No data available
pH:	at 25 °C, 5 g/L: 4.3
Kinematic viscosity:	Not applicable
Water solubility:	Soluble
Partition coefficient n-octanol/water (log value):	< -3.3 log P(o/w) (Manganese monoglycinate sulfate) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
Vapour pressure:	No data available
Density:	No data available
Relative vapour density:	Not applicable
Particle characteristics:	No data available

9.2 Other information

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.
Oxidizing characteristics:	No data available
Auto-ignition temperature:	No data available
Bulk density:	800 - 1,000 g/L
Additional information:	conductivity: 730 µS (1g/L, 22,6°C, pH=3,51) 2,69 mS (5g/L, 26,5°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Protect from heat and direct sunlight. Protect from moisture contamination.

10.5 Incompatible materials

Do not store together with: strong acids, strong bases, oxidizing agents.

10.6 Hazardous decomposition products

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

Thermal decomposition: No data available

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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): ATE > 2,000 mg/kg

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.

Serious eye damage/irritation: Eye Dam. 1; H318 = 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: Lack of data.

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.

11.2 Information on other hazards

Endocrine disrupting properties:

None

Other information:

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

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

Information about Citric acid:
LD50 Rat, oral: 5,400 mg/kg (OECD 401)
LD50 Rat, dermal: > 2,000 mg/kg (OECD 402)

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 contact with skin: Reddening. On sustained exposition to this chemical: dermatitis.
After eye contact: Upon direct contact with eyes may cause burning, tearing, redness.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

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 monoglycinate 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)

Information about Citric acid:
Bacterial toxicity:
NOEC Pseudomonas putida: > 10000 mg/L/16h
algae toxicity:
NOEC 425 mg/L/8d
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 1535 mg/L/24h (OECD 202)
Fish toxicity:
LC50 Leuciscus idus: 440 - 706 mg/L/48h (OECD 203)

12.2 Persistence and degradability

Further details:

No data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:

< -3.3 log P(o/w) (Manganese monoglycinate sulfate)
Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

The product does not contain any substances classified as PBT or vPvB.

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 02 01 08* = Agrochemical waste containing hazardous substances
* = Evidence for disposal must be provided.

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.

Section 14. Transport information

14.1 UN number or ID number

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

14.2 UN proper shipping name

ADR/RID, ADN, IMDG, IATA-DGR:
UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Zinc glycinate sulfate hydrate, Copper glycinate sulfate dihydrate)

14.3 Transport hazard class(es)

ADR/RID, ADN: Class 9, Code: M7
IMDG: Class 9, Subrisk -
IATA-DGR: Class 9

14.4 Packing group

ADR/RID, ADN, IMDG, IATA-DGR:
III

14.5 Environmental hazards

Dangerous for the environment:
Substance/mixture is environmentally hazardous according to the criteria of the UN model regulations.
Marine pollutant - IMDG: yes
Marine pollutant - ADN: yes

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board:	ADR/RID: Hazard identification number 90, UN number UN 3077
Hazard label:	9
Special Provisions:	274 335 375 601
Limited quantities:	5 kg
EQ:	E1
Package - Instructions:	P002 IBC08 LP02 R001
Package - Special Provisions:	PP12 B3
Special provisions for packing together:	MP10
Portable tanks - Instructions:	T1 BK1 BK2 BK3
Portable tanks - Special Provisions:	TP33
Tank coding:	SGAV LGBV
Tunnel restriction code:	-

Inland waterway craft (ADN)

Hazard label:	9
Special Provisions:	274 335 375 601
Limited quantities:	5 kg
EQ:	E1
Transport permitted:	T
Equipment necessary:	PP

Sea transport (IMDG)

EmS:	F-A, S-F
Special Provisions:	274 335 375 966 967 969
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:	-
Segregation group:	none

Air transport (IATA)

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

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - EC member states

Labelling of packaging with <= 125mL content

Hazard symbols:

Signal word: **Danger**

Hazard statements:

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

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

Further regulations, limitations and legal requirements:

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: Environmental hazards: Code E1, Quantity threshold 100 000 kg / 200 000 kg

Use restriction according to REACH annex XVII, no.: 75

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Wording of the H-phrases under paragraph 2 and 3:

H315 = Causes skin irritation.
H318 = Causes serious eye damage.
H410 = Very toxic to aquatic life with long lasting effects.
H303 =
H400 = Very toxic to aquatic life.
H412 = Harmful to aquatic life with long lasting effects.
H302 = Harmful if swallowed.
H319 = Causes serious eye irritation.
H335 = May cause respiratory irritation.

Reason of change: Changes in section 9: Bulk density
Changes in section 1: Product name

Date of first version: 28/9/2023

Department issuing data sheet:

see section 1: Department responsible for information

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
ATE: Acute toxicity estimate
ATEmix: Acute Toxicity Estimate of mixture
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%
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
EU: European Union
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
IMO: International Maritime Organization
LC50: Median lethal concentration
LD50: Lethal dose 50%
log P(o/w): Partition coefficient: octanol/water
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
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
Skin Irrit.: Skin irritation
STOT SE: Specific target organ toxicity - single exposure
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances
UN: United Nations
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

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.

Most recent product information is available at:
https://sumdat.net/bargb9qn