Safety Data Sheet

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Last Revision Date 05-Oct-2021 **Version:** 1

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

1.1. Product identifier

Product Name	**Start&Gro 13-14-24+2MgO+TE**
Product Code	**2000-225HA**
Unique Formula Identifier (UFI)	**JQH5-U0UY-800G-N930**
REACH registration number	Not applicable
Pure substance/mixture	Mixture

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

Recommended Use	Fertilizer (PC12). Restricted to professional users.
Uses Advised Against	Consumer use (SU21)

Reason why uses advised against Use advised against in Chemical Safety Assessment per REACH Annex I point 7 2.3

1.3. Details of the supplier of the safety data sheet

Everris International B.V.Nijverheidsweg 1-5; 6422 PD Heerlen (NL); Tel: +31 (0)45-5609100; Fax: +31 (0)45-5609190

For further information, please contact: INFO-MSDS@EVERRIS.COM
Non-Emergency Telephone Number +31 (0) 418655700

1.4. Emergency telephone number

IN CASE OF AN EMERGENCY CALL: +44 1235 239 670 (24/7)

Europe	**112**
Austria	+43 1 406 43 43
Belgium	070 245 245
Denmark	+45 8212 1212
Finland	0800 147 111
France	+ 33 (0)1 45 42 59
Ireland	01 809 2566
Netherlands	088 755 8000 (24/7)
Norway	+45 735 80500
Poland	+48 42 2538 400
Portugal	+351 800 250 250
Spain	+34 91 562 04 20
Sweden	112
Switzerland	Tox Info SW 145 (24h)
United Kingdom	111

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Chronic aquatic toxicity	Category 3 - (H412)
Oxidizing solids	Category 3 - (H272)

2.2. Label elements

Signal word
Warning

Hazard statements
H412 - Harmful to aquatic life with long lasting effects
H272 - May intensify fire; oxidizer

Precautionary Statements - EU (§28, 1272/2008)
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P220 - Keep away from clothing and other combustible materials
P280 - Wear protective gloves/protective clothing/eye protection/face protection

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	*EC No (EU Index No)*	*Weight-%*	*Classification according to Regulation (EC) No. 1272/2008 [CLP]*	*Specific concentration limit (SCL)*	*REACH registration number*	*M-Factor*	*M-Factor (long-term)*
Iron-EDTA-13; Fe-EDTA (15708-41-5)	239-802-2	0.1 - 1%	-	-	01-2119496228-27	-	-
Sodium molybdate; Na_2MoO_4 (7631-95-0)	231-551-7	0.1 - 1%	-	-	01-2119489495-21	-	-
Manganese sulphate; $MnSO_4$ (7785-87-7)	232-089-9	0.1 - 1%	STOT RE 2 (H373) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	-	01-2119456624-35	-	-
Magnesium oxide; MgO (1309-48-4)	215-171-9	0.1 - 1%	-	-	Exempt	-	-
Copper-EDTA; Cu-EDTA (14025-15-1)	237-864-5	0.1 - 1%	Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	-	01-2119963944-23	-	-
Copper sulphate+5H2O; $CuSO_4+5H_2O$ (7758-99-8)	231-847-6	0.1 - 1%	Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Acute 1 (H400)	-	01-2119520566-40	10	1

			Aquatic Chronic 1 (H410)				
Boric acid; H_3BO_3 (10043-35-3)	233-139-2	0.1 - 1%	Repr. 1B (H360FD)	-	01-2119486683-25	-	-
Zinc sulphate+1H2O; $ZnSO_4$+1H_2O (7446-19-7)	231-793-3	0.1 - 1%	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	01-2119474684-27	1	1

*The exact percentage (concentration) of composition has been withheld as a trade secret

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L
Iron-EDTA-13; Fe-EDTA	5000	2000	No data available
Sodium molybdate; Na_2MoO_4	4000	2000	No data available
Manganese sulphate; $MnSO_4$	782	No data available	No data available
Magnesium oxide; MgO	3990 3870	No data available	No data available
Copper sulphate+5H2O; $CuSO_4$+5H_2O	481 + 960	8000	No data available
Boric acid; H_3BO_3	2660	2000	2.12

Chemical name	CAS No	SVHC candidates
Boric acid; H_3BO_3	10043-35-3	Present

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aid measures should be executed by trained personnel only.

Inhalation Remove to fresh air. In the case of inhalation of aerosol/mist consult a physician if necessary. If not breathing, give artificial respiration. If symptoms persist, call a physician. Dusty conditions are unlikely if product is used as intended. However, if prolonged inhalation of dust occurs, remove casualty to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

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

Symptoms None known.

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

Note to physicians Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors.
Thermal decomposition can lead to release of irritating and toxic gases and vapors The product itself does not burn May intensify fire; oxidizer

Hazardous Combustion Products Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Wear protective gloves/clothing and eye/face protection.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8. Prevent entry into waterways, sewers, basements or confined areas.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal. Use up product completely. Packaging material is industrial waste.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes. Avoid generation of dust. In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions KEEP OUT OF REACH OF CHILDREN AND PETS. Keep container tightly closed in a dry and well-ventilated place. For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used packaging should be closed well. Keep away from frost.

Packaging materials Keep in original container, tightly closed in a safe place.

7.3. Specific end use(s)

Specific use(s) Fertilizer.

Exposure scenario Mixture. Not required.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Other Information

LGK (Germany) TRGS 510 5.1B

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Iron-EDTA-13; Fe-EDTA	-	-	TWA: 1 mg/m³	TWA: 1.0 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³
Sodium molybdate; Na_2MoO_4	-	TWA: 5 mg/m³ STEL 10 mg/m³	TWA: 0.5 mg/m³	TWA: 5.0 mg/m³ TWA: 10.0 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³
Manganese sulphate; $MnSO_4$	-	TWA: 0.2 mg/m³ STEL 1.6 mg/m³	TWA: 0.05 mg/m³	TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³
Magnesium oxide; MgO	-	TWA: 5 mg/m³ TWA: 10 mg/m³ STEL 20 mg/m³ STEL 10 mg/m³	TWA: 10 mg/m³	TWA: 10.0 mg/m³	TWA: 4 mg/m³ TWA: 10 mg/m³
Copper-EDTA; Cu-EDTA	-	TWA: 1 mg/m³ TWA: 0.1 mg/m³ STEL 4 mg/m³ STEL 0.4 mg/m³	-	-	-
Copper sulphate+5H2O; $CuSO_4+5H_2O$	-	TWA: 1 mg/m³ TWA: 0.1 mg/m³ STEL 4 mg/m³ STEL 0.4 mg/m³	-	TWA: 1.0 mg/m³	-
Boric acid; H_3BO_3	-	-	TWA: 2 mg/m³ STEL: 6 mg/m³	TWA: 5.0 mg/m³	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Iron-EDTA-13; Fe-EDTA	-	-	TWA: 1 mg/m³ STEL: 2 mg/m³	-	TWA: 1 mg/m³

Sodium molybdate; Na_2MoO_4	-	TWA: 5 mg/m³ Ceiling: 25 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 5 mg/m³	TWA: 0.5 mg/m³
Manganese sulphate; $MnSO_4$	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 1 mg/m³ Ceiling: 2 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³ STEL: 0.4 mg/m³ STEL: 0.1 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.02 mg/m³ TWA: 0.2 mg/m³
Magnesium oxide; MgO	-	TWA: 5 mg/m³ Ceiling: 10 mg/m³	TWA: 6 mg/m³ STEL: 12 mg/m³	-	-
Copper-EDTA; Cu-EDTA	-	-	-	-	TWA: 0.02 mg/m³
Copper sulphate+5H2O; $CuSO_4+5H_2O$	-	-	-	TWA: 1 mg/m³ TWA: 0.2 mg/m³	TWA: 0.02 mg/m³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Iron-EDTA-13; Fe-EDTA	-	-	-	TWA: 1 mg/m³ STEL: 2 mg/m³	-
Sodium molybdate; Na_2MoO_4	TWA: 5 mg/m³ STEL: 10 mg/m³	-	-	TWA: 5 mg/m³	TWA: 5 mg/m³
Manganese sulphate; $MnSO_4$	-	TWA: 0.2 mg/m³ TWA: 0.02 mg/m³	TWA: 0.2 mg/m³ TWA: 0.02 mg/m³ Peak: 1.6 mg/m³ Peak: 0.16 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³
Magnesium oxide; MgO	TWA: 10 mg/m³	TWA: 1.25 mg/m³ TWA: 10 mg/m³	TWA: 0.3 mg/m³ TWA: 4 mg/m³ Peak: 2.4 mg/m³	TWA: 10 mg/m³ TWA: 5 mg/m³	TWA: 6 mg/m³
Copper-EDTA; Cu-EDTA	-	-	-	-	TWA: 0.1 mg/m³ STEL: 0.2 mg/m³
Copper sulphate+5H2O; $CuSO_4+5H_2O$	-	-	TWA: 0.01 mg/m³ Peak: 0.02 mg/m³	-	TWA: 0.1 mg/m³ STEL: 0.2 mg/m³
Boric acid; H_3BO_3	-	TWA: 0.5 mg/m³	TWA: 10 mg/m³ Peak: 10 mg/m³	-	-
Zinc sulphate+1H2O; $ZnSO_4+1H_2O$	-	-	TWA: 0.1 mg/m³ TWA: 2 mg/m³ Peak: 0.4 mg/m³ Peak: 4 mg/m³	-	-
Chemical name	Italy MDLPS	Latvia	Lithuania	Luxembourg	Netherlands
Sodium molybdate; Na_2MoO_4	-	-	TWA: 5 mg/m³ TWA: 10 mg/m³	-	-
Manganese sulphate; $MnSO_4$	TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³
Magnesium oxide; MgO	-	-	TWA: 4 mg/m³	-	-
Copper sulphate+5H2O; $CuSO_4+5H_2O$	-	TWA: 0.5 mg/m³	TWA: 1 mg/m³ TWA: 0.2 mg/m³	-	TWA: 0.1 mg/m³
Boric acid; H_3BO_3	-	TWA: 10 mg/m³	TWA: 10 mg/m³	-	-
Chemical name	Norway	Poland	Portugal	Romania	Slovakia
Iron-EDTA-13; Fe-EDTA	TWA: 1 mg/m³ STEL: 3 mg/m³	-	TWA: 1 mg/m³	-	-
Sodium molybdate; Na_2MoO_4	TWA: 5 mg/m³ STEL: 10 mg/m³	STEL: 10 mg/m³ TWA: 4 mg/m³	TWA: 0.5 mg/m³	TWA: 2 mg/m³ STEL: 5 mg/m³	TWA: 5 mg/m³
Manganese sulphate; $MnSO_4$	TWA: 0.1 mg/m³ STEL: 0.1 ppm	TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³
Magnesium oxide; MgO	TWA: 10 mg/m³ STEL: 20 mg/m³	TWA: 10 mg/m³	TWA: 10 mg/m³	TWA: 5 mg/m³ STEL: 15 mg/m³	TWA: 10 mg/m³ TWA: 4 mg/m³
Copper sulphate+5H2O; $CuSO_4+5H_2O$	-	TWA: 0.2 mg/m³	-	-	TWA: 1 mg/m³ TWA: 0.2 ppm
Boric acid; H_3BO_3	-	-	TWA: 2 mg/m³ STEL: 6 mg/m³	-	-
Chemical name	Slovenia	Spain	Sweden	Switzerland	United Kingdom
Iron-EDTA-13; Fe-EDTA	-	TWA: 1 mg/m³	-	TWA: 1 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³
Sodium molybdate; Na_2MoO_4	-	TWA: 0.5 mg/m³	NGV: 5 mg/m³ NGV: 10 mg/m³	TWA: 5 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³
Manganese sulphate;	TWA: 0.05 mg/m³	TWA: 0.2 mg/m³	NGV: 0.2 mg/m³	TWA: 0.5 mg/m³	TWA: 0.2 mg/m³

$MnSO_4$	STEL: 0.4 mg/m³	TWA: 0.05 mg/m³	NGV: 0.05 mg/m³		TWA: 0.05 mg/m³ STEL: 0.6 mg/m³ STEL: 0.15 mg/m³
Magnesium oxide; MgO	-	TWA: 10 mg/m³	-	TWA: 3 mg/m³ TWA: 10 mg/m³	STEL: 12 mg/m³ TWA: 4 mg/m³
Copper-EDTA; Cu-EDTA	-	TWA: 0.01 mg/m³	-	-	TWA: 1 mg/m³ STEL: 2 mg/m³
Copper sulphate+5H2O; $CuSO_4+5H_2O$	-	TWA: 0.01 mg/m³	NGV: 0.01 mg/m³	TWA: 0.1 mg/m³ STEL: 0.2 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³
Boric acid; H_3BO_3	TWA: 0.5 mg/m³ STEL: 1.0 mg/m³	TWA: 2 mg/m³ STEL: 6 mg/m³	-	TWA: 1.8 mg/m³ STEL: 1.8 mg/m³	-

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Manganese sulphate; $MnSO_4$	-	20 µg/L (blood - whole blood not provided) (-)	-	-	-
Chemical name	**Denmark**	**Finland**	**France**	**Germany DFG**	**Germany TRGS**
Sodium molybdate; Na_2MoO_4	-	-	-	150 µg/L - BAR (not determined) urine	-
Manganese sulphate; $MnSO_4$	-	-	-	15 µg/L - BAR (end of exposure or end of shift) blood 15 µg/L - BAR (for long-term exposures: at the end of the shift after several shifts) blood	-

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment Wear normal, light working clothing

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Nitrile rubber (0.26 mm). Break through time. > 8 h.

Skin and body protection Lightweight protective clothing.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained. Prevent product from entering drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid
Appearance: Granules, powder
Color: Off-white
Odor: Fertilizer.

Property	Values	Remarks • Method
Melting Point/Freezing Point:	No data available	None known
Boiling Point/Range:	No data available	None known
Flammability (solid, gas):	No data available	None known
Flammability Limits in Air:		None known
Upper Flammability Limit:	Not applicable	
Lower Flammability Limit:	Not applicable	
Flash Point:	No data available	None known
Autoignition Temperature:	No data available	None known
Decomposition Temperature:		None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic Viscosity:	No data available	None known
Dynamic Viscosity:	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition Coefficient:	No data available	None known
Vapor Pressure:	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	
Density:	No data available	
Vapour density	No data available	None known
Particle characteristics		
Particle Size	No data available	
Particle Size Distribution	No data available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Not reactive.

10.2. Chemical stability

Stability Stable under normal conditions.

Specific methods:
Sensitivity to mechanical impact Not sensitive.
Sensitivity to static discharge Not sensitive.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Incompatible materials Keep away from catalysts like derivates of hexavalent chromium and metal halides. Keep away from flammable products (fuels) like charcoal, wood, flour, soot etc.

10.6. Hazardous decomposition products

Hazardous Decomposition Products — None under normal processing. None under normal use conditions. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation — Specific test data for the substance or mixture is not available. Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact — Specific test data for the substance or mixture is not available. May cause irritation.

Skin contact — May cause irritation.

Ingestion — May cause gastrointestinal discomfort if consumed in large amounts.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms — No information available.

Numerical measures of toxicity

Acute toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Iron-EDTA-13; Fe-EDTA	= 5 g/kg (Rat)	> 2000 mg/kg (Rat)	> 2.75 mg/L (Rat) 4 h
Sodium molybdate; Na_2MoO_4	= 4233 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5.84 mg/L (Rat) 4 h
Manganese sulphate; $MnSO_4$	= 2125 mg/kg (Rat)	-	> 4.98 mg/L (Rat) 4h
Magnesium oxide; MgO	= 3990 mg/kg (Rat) = 3870 mg/kg (Rat)	-	-
Copper-EDTA; Cu-EDTA	-	-	> 5.3 mg/L (Rat) 4 h
Copper sulphate+5H2O; $CuSO_4+5H_2O$	= 960 mg/kg (Rat)	> 8 g/kg (Rabbit)	-
Boric acid; H_3BO_3	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.12 mg/L (Rat) 4 h

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:

Skin corrosion/irritation — No information available.

Serious eye damage/eye irritation — No information available.

Respiratory or skin sensitization — Based on available data, the classification criteria are not met.

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

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

Chemical name	European Union
Boric acid; H_3BO_3 10043-35-3	Repr. 1B

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

STOT - single exposure Based on available data, the classification criteria are not met.
STOT - repeated exposure Based on available data, the classification criteria are not met
Aspiration hazard Based on available data, the classification criteria are not met
Endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicity
Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Iron-EDTA-13; Fe-EDTA	-	LC50: >100mg/L (96h, Oncorhynchus mykiss)	-	-
Copper-EDTA; Cu-EDTA	-	LC50: =555mg/L (96h, Lepomis macrochirus)	-	-
Copper sulphate+5H2O; $CuSO_4$+5H_2O	-	LC50: 0.66 - 1.15mg/L (96h, Lepomis macrochirus) LC50: 0.96 - 1.8mg/L (96h, Lepomis macrochirus) LC50: 0.1478 - 0.165mg/L (96h, Oncorhynchus mykiss) LC50: 0.09 - 0.19mg/L (96h, Oncorhynchus mykiss) LC50: =0.6752mg/L (96h, Pimephales promelas)	-	EC50: 0.147 - 0.227mg/L (48h, Daphnia magna)
Boric acid; H_3BO_3	-	-	-	EC50: 115 - 153mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and Degradability: No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Boric acid; H_3BO_3	-1.09

12.4. Mobility in soil

Mobility in soil no data available.

Mobility no data available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Iron-EDTA-13; Fe-EDTA	The substance is not PBT / vPvB PBT assessment does not apply
Sodium molybdate; Na_2MoO_4	The substance is not PBT / vPvB PBT assessment does not apply
Manganese sulphate; $MnSO_4$	The substance is not PBT / vPvB PBT assessment does not apply
Copper-EDTA; Cu-EDTA	The substance is not PBT / vPvB
Copper sulphate+5H2O; $CuSO_4+5H_2O$	PBT assessment does not apply
Boric acid; H_3BO_3	The substance is not PBT / vPvB PBT assessment does not apply
Zinc sulphate+1H2O; $ZnSO_4+1H_2O$	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects
. No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

Other Information Use up product completely. Packaging material is industrial waste. If material is uncontaminated, collect and reuse as recommended for product.

SECTION 14: Transport information

IMDG

14.1
UN-No: 1479
14.2
Proper shipping name: Oxidizing solid, N.O.S. (Potassium nitrate)
14.3
Transport hazard class(es) 5.1
14.4
Packing group: III
Limited Quantity 5 kg
14.5
Marine Pollutant: Not regulated

Chemical name	IMDG - Marine Pollutants
Copper sulphate+5H2O; $CuSO_4+5H_2O$	PP

14.6
EmS: F-A / S-Q
Special Provisions 223, 274, 900
14.7
Bulk transport according Annex II of MARPOL and IBC Code No data available

ADR

14.1
UN-No: 1479
14.2
Proper shipping name: Oxidizing solid, N.O.S. (Potassium nitrate)
14.3
Transport hazard class(es) 5.1
14.4
Packing group: III
14.5
Environmental hazards Not regulated
14.6
Special Provisions 274
Tunnel restriction code E
Limited Quantity 5 kg

IATA

14.1
UN number or ID number 1479
14.2
Proper shipping name: Oxidizing solid, N.O.S. (Potassium nitrate)
14.3
Transport hazard class(es) 5.1
14.4
Packing group III
14.5
Environmental hazards Not regulated
14.6
Special Provisions A3

SECTION 15: Regulatory information

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

National regulations

Denmark
France

Germany
LGK (Germany) TRGS 510 5.1B
Gefahrstoffverordnung (Germany) TRGS 511 Not regulated
Water hazard class (WGK) non-hazardous to water (nwg)

Chemical name	German WGK Section
Iron-EDTA-13; Fe-EDTA	2
Sodium molybdate; Na_2MoO_4	Reg. no. 638, hazard class 1 - slightly hazardous to water
Manganese sulphate; $MnSO_4$	2
Magnesium oxide; MgO	Reg. no. 5208, hazard class 1 - slightly hazardous to water (fume)
Copper-EDTA; Cu-EDTA	Reg. no. 9115, hazard class 2 - obviously hazardous to water

Chemical name	German WGK Section
Copper sulphate+5H2O; $CuSO_4$+5H_2O	3
Boric acid; H_3BO_3	Reg. no. 315, hazard class 1 - slightly hazardous to water

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
Sodium molybdate; Na_2MoO_4	-	-	Fertility Category 2
Manganese sulphate; $MnSO_4$	-	-	Fertility Category 2 Development Category 2
Boric acid; H_3BO_3	-	-	Fertility Category 1B Development Category 1B

European Union
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 94/33/EC on the protection of young people at work
Not to be used by professional users below 18 years of age, see the National Working Environment Authorities Executive Order on young peoples dangerous work.

Authorizations and/or restrictions on use:
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Copper sulphate+5H2O; $CuSO_4$+5H_2O	75.	-
Boric acid; H_3BO_3	30	-
Zinc sulphate+1H2O; $ZnSO_4$+1H_2O	75.	-

REGULATION (EU) 2019/1148 on the marketing and use of explosives precursors
This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point

Persistent Organic Pollutants Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

EU - Plant Protection Products (1107/2009/EC)

Biocidal Products Regulation (EU) No 528/2012 (BPR)

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Copper sulphate+5H2O; $CuSO_4$+5H_2O	2 - Disinfectants and algaecides not intended for direct application to humans or animals
Boric acid; H_3BO_3	Product-type 8: Wood preservatives Product type 8 (details in Commission Implementing Decision 2017/2334/EU) 8 - Wood preservatives

International Inventories:

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report Substance(s) usage is covered according to Reach regulation 1907/2006

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H302 - Harmful if swallowed
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H360FD - May damage fertility. May damage the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H411 - Toxic to aquatic life with long lasting effects

Legend
SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
vPvB: Very Persistent and very Bioaccumulative (vPvB) Chemicals

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Classification procedure
• Calculation method
• Expert judgment and weight of evidence determination

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	*Method Used*
Acute oral toxicity	*Calculation method*
Acute dermal toxicity	*Calculation method*
Acute inhalation toxicity - gas	*Calculation method*
Acute inhalation toxicity - vapor	*Calculation method*
Acute inhalation toxicity - dust/mist	*Calculation method*
Skin corrosion/irritation	*Calculation method*
Serious eye damage/eye irritation	*Calculation method*
Respiratory sensitization	*Calculation method*
Skin sensitization	*Calculation method*
Mutagenicity	*Calculation method*
Carcinogenicity	*Calculation method*
Reproductive toxicity	*Calculation method*
STOT - single exposure	*Calculation method*
STOT - repeated exposure	*Calculation method*
Acute aquatic toxicity	*Calculation method*
Chronic aquatic toxicity	*Calculation method*
Aspiration hazard	*Calculation method*

Ozone	*Calculation method*

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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Restrictions on use Restricted to professional users.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
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End of Safety Data Sheet