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 08-Mar-2022 **Version:** 1

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

1.1. Product identifier

Product Name	**Osmocote Bloom 13-7-18+1.5MgO+TE; 2-3M**
Product Code	**8739-225HA**
Unique Formula Identifier (UFI)	**C96S-Q096-A00G-EU2S**
Safety data sheet number	8739-225HA
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-RA@ICL-GROUP.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	+32 (0) 70 245 245
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	+47 22 59 13 00
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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation	Category 1 - (H318)
Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label elements

Contains Potassium sulphate; K_2SO_4, Manganese sulphate; $MnSO_4$
Signal word
Danger

Hazard statements
H318 - Causes serious eye damage
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P280 - Wear 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 or doctor

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)*
Ammonium nitrate; NH_4NO_3 (6484-52-2)	229-347-8	25 - 40%	Eye irrit. 2 (H319) Ox. Sol. 3 (H272)	Eye Irrit. 2 :: 10%<=C<100%	01-2119490981-27	-	-
Potassium sulphate; K_2SO_4 (7778-80-5)	231-915-5	10 - 25%	Eye dam. 1 (H318)	-	01-2119489441-34	-	-
Iron sulphate; $FeSO_4+7H_2O$ (7782-63-0)	616-510-7	1 - 5%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	Skin Irrit. 2 :: C>=25%	01-2119513203-57	-	-
Copper sulphate anhydrous; $CuSO_4$ (7758-98-7)	231-847-6 (029-004-00-0)	0.1 - 0.3%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) Aquatic Chronic	-	01-2119520566-40	10	10

			1 (H410)				
Manganese sulphate; $MnSO_4$ (7785-87-7)	232-089-9	0.1 - 0.3%	STOT RE 2 (H373) Aquatic Chronic 2 (H411) Eye dam. 1 (H318)	-	01-2119456624-35	-	-
Disodium tetraborate pentahydrate (12179-04-3)	601-808-1	0.1 - 0.3%	Repr. 1B (H360FD)	-	01-2119490790-32	-	-
Zinc sulfate; $ZnSO_4$ (7733-02-0)	231-793-3 (030-006-00-9)	< 0.1%	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
Ammonium nitrate; NH_4NO_3	2217	5000	0.527
Potassium sulphate; K_2SO_4	6600	2000	No data available
Copper sulphate anhydrous; $CuSO_4$	300	2000	No data available
Manganese sulphate; $MnSO_4$	782	No data available	No data available
Disodium tetraborate pentahydrate	2403	No data available	No data available
Zinc sulfate; $ZnSO_4$	1710	2000	No data available

Chemical name	CAS No.	SVHC candidates
Disodium tetraborate pentahydrate	12179-04-3	X

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 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.
In case of fire, the product will smoulder even without the presence of external oxygen. In these conditions the product will show self sustaining decomposition. The best method to extinguish the fire is to cool the decomposition front with water Thermal decomposition can lead to release of irritating and toxic gases and vapors

Hazardous Combustion Products Carbon oxides. Phosphorus oxides. Ammonia. Nitrogen oxides (NOx).

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

PGS-7 (The Netherlands) 2/B
LGK (Germany) TRGS 510 5.1C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Potassium sulphate; K_2SO_4	-	-	-	TWA: 10.0 mg/m³	-
Iron sulphate; $FeSO_4+7H_2O$	-	-	TWA: 1 mg/m³	TWA: 1.0 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³
Copper sulphate anhydrous; $CuSO_4$	-	TWA: 1 mg/m³ TWA: 0.1 mg/m³ STEL 4 mg/m³ STEL 0.4 mg/m³	-	TWA: 1.0 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
Disodium tetraborate pentahydrate	-	-	TWA: 2 mg/m³ STEL: 6 mg/m³	TWA: 5.0 mg/m³	TWA: 1 mg/m³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Ammonium nitrate;	-	TWA: 10.0 mg/m³	-	-	-

NH_4NO_3					
Iron sulphate; $FeSO_4+7H_2O$	-	-	TWA: 1 mg/m³ STEL: 2 mg/m³	-	TWA: 1 mg/m³
Copper sulphate anhydrous; $CuSO_4$	-	-	-	TWA: 1 mg/m³ TWA: 0.2 mg/m³	TWA: 0.02 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
Disodium tetraborate pentahydrate	-	-	TWA: 1 mg/m³ STEL: 2 mg/m³	-	-
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Iron sulphate; $FeSO_4+7H_2O$	-	-	-	TWA: 1 mg/m³ STEL: 2 mg/m³	-
Copper sulphate anhydrous; $CuSO_4$	-	-	TWA: 0.01 mg/m³ Peak: 0.02 mg/m³	-	TWA: 0.1 mg/m³ STEL: 0.2 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
Disodium tetraborate pentahydrate	TWA: 1 mg/m³	-	TWA: 5 mg/m³ Peak: 5 mg/m³	TWA: 10 mg/m³	-
Zinc sulfate; $ZnSO_4$	-	-	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
Potassium sulphate; K_2SO_4	-	TWA: 10 mg/m³	TWA: 10 mg/m³	-	-
Copper sulphate anhydrous; $CuSO_4$	-	TWA: 0.5 mg/m³	TWA: 1 mg/m³ TWA: 0.2 mg/m³	-	TWA: 0.1 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
Chemical name	Norway	Poland	Portugal	Romania	Slovakia
Iron sulphate; $FeSO_4+7H_2O$	TWA: 1 mg/m³ STEL: 3 mg/m³	-	TWA: 1 mg/m³	-	-
Copper sulphate anhydrous; $CuSO_4$	-	TWA: 0.2 mg/m³	-	-	TWA: 1 mg/m³ TWA: 0.2 ppm
Manganese sulphate; $MnSO_4$	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³ STEL: 0.6 ppm STEL: 0.15 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: 0.05 mg/m³ TWA: 0.2 mg/m³
Disodium tetraborate pentahydrate	-	-	TWA: 2 mg/m³ STEL: 6 mg/m³	-	-
Zinc sulfate; $ZnSO_4$	-	-	-	-	TWA: 0.1 mg/m³ TWA: 2 mg/m³
Chemical name	Slovenia	Spain	Sweden	Switzerland	United Kingdom
Iron sulphate; $FeSO_4+7H_2O$	-	TWA: 1 mg/m³	-	TWA: 1 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³
Copper sulphate anhydrous; $CuSO_4$	-	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
Manganese sulphate; $MnSO_4$	TWA: 0.05 mg/m³ STEL: 0.4 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	NGV: 0.2 mg/m³ NGV: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.1 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³ STEL: 0.6 mg/m³ STEL: 0.15 mg/m³
Disodium tetraborate pentahydrate	-	TWA: 2 mg/m³ STEL: 6 mg/m³	-	-	TWA: 1 mg/m³ STEL: 3 mg/m³

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Manganese sulphate; $MnSO_4$	-	Check 20 µg/L (blood - whole blood not provided) (-)	-	-	-
Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
Manganese sulphate; $MnSO_4$	-	-	-	15 µg/L - BAR (no restriction in steady state) blood	-

Derived No Effect Level (DNEL) 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
Color: Brown, green
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	+/- 1092 kg/m^3	
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 Not applicable

9.2.1. Information with regard to physical hazard classes
Not applicable
Explosive properties: Doesn't present explosion hazard

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 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 Causes serious eye damage.

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
Based on available data, the classification criteria are not met

Acute toxicity

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

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium nitrate; NH_4NO_3	= 2217 mg/kg (Rat)	> 5000 mg/kg (Rat)	> 0.527 mg/L (Rat) 4 h
Potassium sulphate; K_2SO_4	= 6600 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Iron sulphate; $FeSO_4+7H_2O$	= 1520 mg/kg	-	-
Copper sulphate anhydrous; $CuSO_4$	= 300 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Manganese sulphate; $MnSO_4$	= 782 mg/kg (Rat)	-	> 4.45 mg/L (Rat) 4 h
Disodium tetraborate pentahydrate	= 2403 mg/kg (Rat)	-	-
Zinc sulfate; $ZnSO_4$	= 1710 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

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
Disodium tetraborate pentahydrate 12179-04-3	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
Not applicable.

SECTION 12: Ecological information

12.1. Toxicity

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

Unknown aquatic toxicity
Contains 7 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Potassium sulphate; K_2SO_4	EC50: =2900mg/L (72h, Desmodesmus subspicatus)	LC50: =653mg/L (96h, Lepomis macrochirus) LC50: =3550mg/L (96h, Lepomis macrochirus) LC50: 510 - 880mg/L (96h, Pimephales promelas)	-	EC50: =890mg/L (48h, Daphnia magna)
Copper sulphate anhydrous; $CuSO_4$	-	LC50: =0.1mg/L (96h, Oncorhynchus mykiss)	-	EC50: 0.0058 - 0.0073mg/L (48h, Daphnia magna)
Zinc sulfate; $ZnSO_4$	EC50: =0.056mg/L (72h, Pseudokirchneriella subcapitata)	LC50: =0.162mg/L (96h, Oncorhynchus mykiss) LC50: 0.03 - 0.05mg/L (96h, Oncorhynchus mykiss) LC50: 0.34 - 0.93mg/L (96h, Oncorhynchus mykiss) LC50: 0.218 - 0.42mg/L (96h, Pimephales promelas) LC50: =0.06mg/L (96h, Pimephales promelas) LC50: 0.23 - 0.48mg/L (96h, Pimephales promelas) LC50: 0.168 - 0.25mg/L (96h, Pimephales promelas) LC50: =0.15mg/L (96h, Cyprinus carpio) LC50: 16.85 - 27.18mg/L (96h, Cyprinus carpio) LC50: 3 - 4.6mg/L (96h, Lepomis macrochirus) LC50: 3.55 - 6.32mg/L (96h, Lepomis macrochirus) LC50: =0.63mg/L (96h, Poecilia reticulata) LC50: 49.23 - 64.16mg/L (96h, Poecilia reticulata) LC50: 0.48 - 1.72mg/L (96h, Poecilia reticulata)	-	EC50: =0.75mg/L (48h, Daphnia magna) EC50: 0.538 - 0.908mg/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
Ammonium nitrate; NH_4NO_3	-3.1

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
Ammonium nitrate; NH_4NO_3	The substance is not PBT / vPvB
Potassium sulphate; K_2SO_4	The substance is not PBT / vPvB
Copper sulphate anhydrous; $CuSO_4$	The substance is not PBT / vPvB
Manganese sulphate; $MnSO_4$	The substance is not PBT / vPvB
Zinc sulfate; $ZnSO_4$	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

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: 2071
14.2
Proper shipping name: AMMONIUM NITRATE BASED FERTILIZER
14.3
Transport hazard class(es) 9
14.4
Packing group: III
14.5

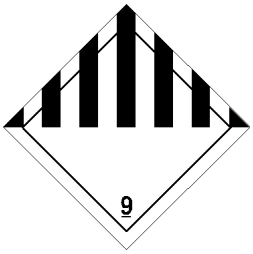
Marine Pollutant: Not regulated

Chemical name	IMDG - Marine Pollutants
Copper sulphate anhydrous; $CuSO_4$	IMDG regulated marine pollutant (Listed in the index, [Note 1], listed under Copper sulphate, anhydrous, hydrates and solution)

14.6
EmS: F-H / S-Q
Special Provisions 186, 193
14.7
Bulk transport according Annex II of MARPOL and IBC Code No data available

ADR
14.1
UN-No: Not regulated
14.2
Proper shipping name: Not regulated
14.3
Transport hazard class(es) Not regulated
14.4
Packing group: Not regulated
14.5
Environmental hazards Not regulated
14.6
Special Provisions None

IATA
14.1
UN number or ID number 2071
14.2
Proper shipping name: AMMONIUM NITRATE BASED FERTILIZER
14.3
Transport hazard class(es) 9
14.4
Packing group III
14.5
Environmental hazards Not regulated
14.6
Special Provisions A89, A90



SECTION 15: Regulatory information

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

National regulations

Denmark
Sikkerhedsgruppe DK B
France
ICPE Classified installation: article 4702

Germany

LGK (Germany) TRGS 510	5.1C
Gefahrstoffverordnung (Germany) TRGS 511	B II
Water hazard class (WGK)	non-hazardous to water (nwg)

Chemical name	German WGK Section
Ammonium nitrate; NH_4NO_3	Reg. no. 212, hazard class 1 - slightly hazardous to water
Potassium sulphate; K_2SO_4	Reg. no. 255, hazard class 1 - slightly hazardous to water
Iron sulphate; $FeSO_4+7H_2O$	3
Copper sulphate anhydrous; $CuSO_4$	Reg. no. 141, hazard class 3 - highly hazardous to water
Manganese sulphate; $MnSO_4$	Reg. no. 522, hazard class 2 - obviously hazardous to water
Disodium tetraborate pentahydrate	Reg. no. 37, hazard class 1 - slightly hazardous to water
Zinc sulfate; $ZnSO_4$	Reg. no. 432, hazard class 3 - highly hazardous to water

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
Manganese sulphate; $MnSO_4$	-	-	Fertility Category 2 Development Category 2
Disodium tetraborate pentahydrate	-	-	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
Ammonium nitrate; NH_4NO_3	Use restricted. See entry 58.	-
Iron sulphate; $FeSO_4+7H_2O$	Use restricted. See entry 75.	-
Copper sulphate anhydrous; $CuSO_4$	Use restricted. See entry 75.	-
Disodium tetraborate pentahydrate	Use restricted. See entry 30. Use restricted. See entry 75.	-
Zinc sulfate; $ZnSO_4$	Use restricted. See entry 75.	-

REGULATION (EU) 2019/1148 on the marketing and use of explosives precursors

Chemical name	REGULATION (EU) 2019/1148 on the marketing and use of explosives precursors
Ammonium nitrate; NH_4NO_3	Present (16% by weight of N in relation to AN or higher)

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All

suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

Named dangerous substances per Seveso Directive (2012/18/EU)

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Ammonium nitrate; NH_4NO_3	5000	10.000

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

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

Chemical name	EU - Plant Protection Products (1107/2009/EC)
Iron sulphate; $FeSO_4+7H_2O$	Plant protection agent

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

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Disodium tetraborate pentahydrate	Product-type 8: Wood preservatives

International Inventories:

TSCA	This product complies with USINV
PICCS:	This product does not comply with phil:
Australian Inventory of Chemical Substances	This product does not comply with AICS

Legend:

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

H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H360 - May damage fertility or 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) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	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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Last Revision Date	08-Mar-2022
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