



SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: Copper Mixture

Other means of identification:

Not relevant

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

Relevant uses (Consumer use): Fertilizer

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Vitax Limited
Owen Street
LE67 3DE Coalville - Leicestershire - United Kingdom
Phone: +44 1530 510060
info@vitax.co.uk
www.vitax.co.uk

1.4 Emergency telephone number: For Healthcare Professionals:
UK NPIS - 0344 892 0111

For General Public:

In an emergency, if the patient has collapsed or is not breathing properly, call 999. The NPIS does not provide poisons information directly to members of the public - for routine poisons advice you should contact your general practitioner or telephone NHS 111 (England) or NHS 24 (Scotland) on 111.

In Wales contact NHS Direct (Wales) on 111 - (currently available in the following health board areas - Hywel Dda, Powys, Aneurin Bevan and Swansea Bay - including Bridgend). If you are outside this area, please call 0845 46 47.

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):

Classification of this product has been carried out in accordance with GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567).

Aquatic Acute 1: Hazardous to the aquatic environment, acute hazard, Category 1, H400

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411

Eye Dam. 1: Serious eye damage, Category 1, H318

2.2 Label elements:

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):

Danger



Hazard statements:

Aquatic Acute 1: Very toxic to aquatic life.

Aquatic Chronic 2: Toxic to aquatic life with long lasting effects.

Eye Dam. 1: Causes serious eye damage.

Precautionary statements:

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Wear protective gloves/protective clothing/eye protection/protective footwear.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Dispose of the contents and/or its container using the separate collection system in your municipality.

Substances that contribute to the classification

Bordeaux complex

2.3 Other hazards:

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Copper Mixture



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SECTION 2: HAZARDS IDENTIFICATION (continued)

Product does not meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Not relevant

3.2 Mixture:

Chemical description: Mixture composed of inorganic substances

Components:

In accordance with Annex II of The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 10034-96-5 EC: 232-089-9 REACH: 01-2119456624-35-XXXX	manganese sulphate · (H2O) Aquatic Chronic 2: H411; STOT RE 2: H373 - Warning	  5 - <25%
CAS: 1332-40-7 EC: Not relevant REACH: 01-2119966120-46-XXXX	Copper Oxychloride Acute Tox. 3: H301; Acute Tox. 4: H332; Aquatic Acute 1: H400; Aquatic Chronic 1: H410 - Danger	  1 - <5%
CAS: 8011-63-0 EC: Not relevant	Bordeaux complex Acute Tox. 4: H332; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Dam. 1: H318 - Danger	   1 - <5%
CAS: 1314-13-2 EC: 215-222-5 REACH: 01-2119463881-32-XXXX	zinc oxide Aquatic Acute 1: H400; Aquatic Chronic 1: H410 - Warning	 1 - <5%

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

Identification	M-factor
Copper Oxychloride CAS: 1332-40-7	Acute 10
	Chronic 1
Bordeaux complex CAS: 8011-63-0	Acute 10
	Chronic 1

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
Copper Oxychloride CAS: 1332-40-7 EC: Not relevant	LD50 oral	100 mg/kg	
	LD50 dermal	Not relevant	
	LC50 inhalation dust	1.95 mg/L	Rat
Bordeaux complex CAS: 8011-63-0 EC: Not relevant	LD50 oral	Not relevant	
	LD50 dermal	Not relevant	
	LC50 inhalation dust	1.97 mg/L	
manganese sulphate · (H2O) CAS: 10034-96-5 EC: 232-089-9	LD50 oral	Not relevant	
	LD50 dermal	Not relevant	
	LC50 inhalation dust	Not relevant	

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

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SECTION 4: FIRST AID MEASURES (continued)

By skin contact:

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or if necessary shower the affected person thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Not relevant

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:**Suitable extinguishing media:**

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and Self Contained Breathing Apparatus. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:**For non-emergency personnel:**

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Due to its non-inflammable nature, the product does not present a fire risk under normal conditions of storage, handling and use.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Preferably use vacuum extraction for cleaning. Given the environmental hazard of the product, it is advisable to use cleaning methods that minimize its dispersion into the surround

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Minimum Temp.: 5 °C

Maximum Temp.: 30 °C

Maximum time: 24 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be assessed in the workplace:

EH40/2005 Workplace exposure limits, fourth edition, published 2020:

Identification		Occupational exposure limits	
Copper Oxchloride CAS: 1332-40-7	WEL (8h)		1 mg/m ³
	WEL (15 min)		2 mg/m ³
Bordeaux complex CAS: 8011-63-0	WEL (8h)		1 mg/m ³
	WEL (15 min)		2 mg/m ³
manganese sulphate · (H ₂ O) CAS: 10034-96-5	WEL (8h)		0.05 mg/m ³
	WEL (15 min)		
Kaolin CAS: 1332-58-7	WEL (8h)		2 mg/m ³
	WEL (15 min)		

Nuisance dust: Inhalable dust 10 mg/m³ // Respirable dust 4 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
manganese sulphate · (H ₂ O) CAS: 10034-96-5 EC: 232-089-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	0.004 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Copper Oxchloride CAS: 1332-40-7 EC: Not relevant	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	137 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	1 mg/m ³	1 mg/m ³
zinc oxide CAS: 1314-13-2 EC: 215-222-5	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	83 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	5 mg/m ³	0.5 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
manganese sulphate · (H ₂ O) CAS: 10034-96-5 EC: 232-089-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	0.002 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	0.043 mg/m ³	Not relevant
Copper Oxchloride CAS: 1332-40-7 EC: Not relevant	Oral	0.082 mg/kg	Not relevant	0.041 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant
zinc oxide CAS: 1314-13-2 EC: 215-222-5	Oral	Not relevant	Not relevant	0.83 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	83 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	2.5 mg/m ³	Not relevant

PNEC:

Identification					
manganese sulphate · (H ₂ O) CAS: 10034-96-5 EC: 232-089-9	STP	56 mg/L	Fresh water	0.03 mg/L	
	Soil	25.1 mg/kg	Marine water	0 mg/L	
	Intermittent	0.088 mg/L	Sediment (Fresh water)	0.011 mg/kg	
	Oral	Not relevant	Sediment (Marine water)	0.001 mg/kg	
Copper Oxchloride CAS: 1332-40-7 EC: Not relevant	STP	0.23 mg/L	Fresh water	0.0078 mg/L	
	Soil	65 mg/kg	Marine water	0.0052 mg/L	
	Intermittent	Not relevant	Sediment (Fresh water)	87 mg/kg	
	Oral	Not relevant	Sediment (Marine water)	676 mg/kg	
zinc oxide CAS: 1314-13-2 EC: 215-222-5	STP	0.1 mg/L	Fresh water	0.0206 mg/L	
	Soil	35.6 mg/kg	Marine water	0.0061 mg/L	
	Intermittent	Not relevant	Sediment (Fresh water)	117.8 mg/kg	
	Oral	Not relevant	Sediment (Marine water)	56.5 mg/kg	

8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<UKCA marking>> or <<CE marking>>. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

If the working conditions and/or safety measures adopted do not allow keeping the airborne concentration of the product below the exposure limits (if any) or at acceptable levels (if no exposure limits exist), suitable respiratory protection equipment chosen by a qualified professional should be used.

C.- Specific protection for the hands

Not relevant

D.- Eye and face protection

Not relevant

E.- Body protection

Not relevant

F.- Additional emergency measures

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

It is not necessary to take additional emergency measures.

Environmental exposure controls:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:

Physical state at 20 °C:	Solid
Appearance:	Characteristic
Colour:	According to the markings on the package
Odour:	Characteristic
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	Not relevant *
Vapour pressure at 20 °C:	Not relevant *
Vapour pressure at 50 °C:	Not relevant *
Evaporation rate at 20 °C:	Not relevant *

Product description:

Density at 20 °C:	Not relevant *
Relative density at 20 °C:	Not relevant *
Dynamic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	Not relevant *
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *

Flammability:

Flash Point:	Not relevant *
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	Not relevant *
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *

Explosive (Solid):

Lower explosive limit:	Not relevant *
Upper explosive limit:	Not relevant *

Particle characteristics:

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Median equivalent diameter: Not relevant *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties: Not relevant *

Oxidising properties: Not relevant *

Corrosive to metals: Not relevant *

Heat of combustion: Not relevant *

Aerosols-total percentage (by mass) of flammable components: Not relevant *

Other safety characteristics:

Surface tension at 20 °C: Not relevant *

Refraction index: Not relevant *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: Mixture based on inorganic substances.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- C- Contact with the skin and the eyes (acute effect):
 - Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.
 - Contact with the eyes: Produces serious eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
 - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
IARC: Not relevant
 - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
 - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- E- Sensitizing effects:
 - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
 - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- G- Specific target organ toxicity (STOT)-repeated exposure:
 - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.
 - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Copper Oxychloride CAS: 1332-40-7 EC: Not relevant	LD50 oral	100 mg/kg	
	LD50 dermal		
	LC50 inhalation dust	1.95 mg/L	Rat
manganese sulphate · (H2O) CAS: 10034-96-5 EC: 232-089-9	LD50 oral	>2000 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation dust	>5 mg/L (4 h)	Rat
zinc oxide CAS: 1314-13-2 EC: 215-222-5	LD50 oral	7950 mg/kg	Mouse
	LD50 dermal		
	LC50 inhalation dust	>5.7 mg/L (4 h)	Rat
Bordeaux complex CAS: 8011-63-0 EC: Not relevant	LD50 oral		
	LD50 dermal		
	LC50 inhalation dust	1.97 mg/L	

SECTION 12: ECOLOGICAL INFORMATION

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SECTION 12: ECOLOGICAL INFORMATION (continued)

The experimental information related to the eco-toxicological properties of the product itself is not available

Very toxic to aquatic life.

12.1 Toxicity:

Acute toxicity:

Identification	Concentration	Species	Genus
manganese sulphate · (H ₂ O) CAS: 10034-96-5	LC50 > 1 - 10 mg/L (96 h)		Fish
	EC50 > 1 - 10 mg/L (48 h)		Crustacean
	EC50 > 1 - 10 mg/L (72 h)		Algae
Copper Oxylchloride CAS: 1332-40-7	LC50 0.193 mg/L (96 h)	Pimephales promelas	Fish
	EC50 0.06 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 Not relevant		
Bordeaux complex CAS: 8011-63-0	LC50 > 0.01 - 0.1 mg/L (96 h)		Fish
	EC50 > 0.01 - 0.1 mg/L (48 h)		Crustacean
	EC50 > 0.01 - 0.1 mg/L (72 h)		Algae
zinc oxide CAS: 1314-13-2	LC50 0.82 mg/L (96 h)	Oncorhynchus kisutch	Fish
	EC50 3.4 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 Not relevant		

Chronic toxicity:

Identification	Concentration	Species	Genus
zinc oxide CAS: 1314-13-2	NOEC 0.44 mg/L	Oncorhynchus mykiss	Fish
	NOEC 0.031 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Not relevant

12.3 Bioaccumulative potential:

Not relevant

12.4 Mobility in soil:

Not relevant

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class
06 10 02*	wastes containing hazardous substances	Hazardous

Type of waste:

HP14 Ecotoxic

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance The Waste (England & Wales) Regulations 2011, 2011 No. 988. As under 15 01 of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of UK REACH the provisions related to waste management are stated:

UK legislation: The Waste (England & Wales) Regulations 2011.



SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2025 and RID 2025:



- 14.1 UN number:** UN3077
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (manganese sulphate · (H₂O))
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**
- Tunnel restriction code: -
- Physico-Chemical properties: see section 9
- Limited quantities: 5 kg
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not relevant

Transport of dangerous goods by sea:

With regard to IMDG 41-22:



- 14.1 UN number:** UN3077
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (manganese sulphate · (H₂O))
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** Yes
- 14.6 Special precautions for user**
- Special regulations: 335, 966, 274, 967, 969
- EmS Codes: F-A, S-F
- Physico-Chemical properties: see section 9
- Limited quantities: 5 kg
- Segregation group: Not relevant
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO 2025:



- 14.1 UN number:** UN3077
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (manganese sulphate · (H₂O))
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**
- Physico-Chemical properties: see section 9
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not relevant

SECTION 15: REGULATORY INFORMATION

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

- Substances listed in UK candidate list of substances of very high concern (SVHCs): Not relevant
- Substances listed in UK REACH Authorisation List (Annex 14): Not relevant

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SECTION 15: REGULATORY INFORMATION (continued)

The Control of Major Accident Hazards Regulations 2015:

Section	Description	Lower-tier requirements	Upper-tier requirements
E1	ENVIRONMENTAL HAZARDS	100	200

Restrictions to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII UK REACH, etc):

Not relevant

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020.

Control of Substances Hazardous to Health Regulations 2002 (as amended)

EH40/2005 Workplace exposure limits.

The Fertilisers and Ammonium Nitrate Material (Amendment) (EU Exit) Regulations 2019.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

Texts of the legislative phrases mentioned in section 2:

H400: Very toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

H318: Causes serious eye damage.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):

Acute Tox. 3: H301 - Toxic if swallowed.

Acute Tox. 4: H332 - Harmful if inhaled.

Aquatic Acute 1: H400 - Very toxic to aquatic life.

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Eye Dam. 1: H318 - Causes serious eye damage.

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

Classification procedure:

Aquatic Acute 1: Calculation method

Aquatic Chronic 2: Calculation method

Eye Dam. 1: Calculation method

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Abbreviations and acronyms:



Copper Mixture



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SECTION 16: OTHER INFORMATION (continued)

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at UK, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -