SAFETY DATA SHEET

according to Commission Regulation (EU) 2020/878 as amended

Naturamer Phosphorus Glow

Creation date	16th April 2025		
Revision date	16th April 2025	Version	1.0

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

1.1. Product identifier — Naturamer Phosphorus Glow

Substance / mixture — mixture

UFI — TD40-H015-N003-7024

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

Mixture's intended use

Concentrated fertilizer is intended for restoration of nutrient deficiency in agricultural plants.

Main intended use

PC-FER-1 Fertilisers

Mixture uses advised against

The product should not be used in ways other than those referred in Section 1.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Name or trade name	UAB "BS Chemical"
Address	Briedžio g. 13, Kretinga Lithuania
Phone	+37066373748
E-mail	info@bs-chemical.lt
Web address	www.bs-chemical.com

Competent person responsible for the safety data sheet

Name	Gintarė Lisauskienė
E-mail	gintare@bs-chemical.lt

1.4. Emergency telephone number

European emergency number: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

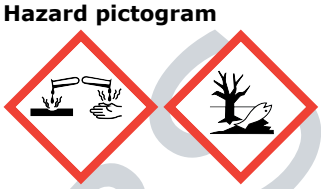
Skin Corr. 1B, H314
Eye Dam. 1, H318
Aquatic Chronic 2, H411

Most serious adverse effects on human health and the environment

Causes severe skin burns and eye damage. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictogram



Signal word

Danger

Hazardous substances

phosphoric acid . %
zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)

Hazard statements

H314	Causes severe skin burns and eye damage.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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 doctor.
P391	Collect spillage.
P501	Dispose of container to in accordance with national regulations.

2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended. Does not contain any PMT or vPvM components.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 015-011-00-6 CAS: 7664-38-2 EC: 231-633-2	phosphoric acid . %	30-45	Skin Corr. 1B, H314 Specific concentration limit: Skin Corr. 1B, H314: C ≥ 25 % Eye Irrit. 2, H319: 10 % ≤ C < 25 % Skin Irrit. 2, H315: 10 % ≤ C < 25 %	1, 2
CAS: 7757-79-1 EC: 231-818-8	Potassium nitrate	5-15	Ox. Sol. 3, H272	3, 4
Index: 030-006-00-9 CAS: 7446-19-7 EC: 231-793-3	zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)	5-10	Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	
CAS: 10034-96-5 EC: 600-072-9	Manganese sulfate monohydrate	≤2.5	Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Chronic 2, H411	
Index: 029-023-00-4 CAS: 7758-99-8 EC: 231-847-6	copper sulphate pentahydrate	≤1.5	Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1) Specific concentration limit: ATE Oral = 481 mg/kg bw	

Notes

1 *Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid … %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.*

2 *A substance for which exposure limits are set.*

3 *Nanoform*

4 *Explosive precursor*

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life-threatening conditions, first of all, retrieve the victim and provide medical aid. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Take care of your own safety, do not let the affected person walk! Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

If on skin

Beware of the contaminated clothes. Take off any rings, watches, bracelets before or during washing if worn in the contaminated areas of the skin. Rinse contaminated areas with a flow of water, lukewarm at best, for 10-30 minutes; do not use any brush, soap or neutralizers. Depending on the situation, call the medical rescue service and always ensure medical treatment.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

If swallowed

RINSE THE MOUTH WITH WATER IMMEDIATELY AND LET THE PERSON DRINK 2-5 dl of cold water to reduce the heating effect of the corrosive substance. Consuming larger amounts of liquid is not advisable as it may induce vomiting and potential inhaling of the corrosive substances in the lungs. The affected person must not be forced to drink, particularly if already feeling pain in the mouth or throat. In this case let the affected person only rinse the mouth with water. DO NOT PROVIDE ACTIVATED CARBON! Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible.

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

If inhaled

Inhaling vapours can cause corrosion of the breathing system.

If on skin

Causes severe skin burns.

If in eyes

Causes serious eye damage.

If swallowed

Corrosion of the digestion system can occur.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use self-contained breathing apparatus and full body protective clothing (EN 469). Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes.

6.2. Environmental precautions

Protect from discharge into water bodies or sewers. It is forbidden to pour the spilled product into the local or storm drains, surface water bodies, or the natural environment. Notify the appropriate authorities immediately.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Fire and explosion prevention measures: No special precautions are required. Preventive measures for environmental protection: control of environmental exposure see subsection 8.2. Advice on general occupational hygiene: Work in accordance with good industrial hygiene and safety practice. Do not store together with food, drink and animal feed. Do not mix with other products. Wash hands before breaks and at the end of the working day. Wash face, hands and exposed skin thoroughly after use/handling. If necessary, use personal protective equipment. Avoid contact with skin and eyes. See section 8.

7.2. Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Keep the package tightly closed at a temperature higher than +5°C in a dry and well-ventilated place. Keep away from direct sunlight and heat sources.

Storage temperature Nuo +5 °C

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

European Union **Commission Directive 2000/39/EC**

Substance name (component)	Type	Value
phosphoric acid . % (CAS: 7664−38−2)	OEL 8 hours	1 mg/m³
	OEL 15 minutes	2 mg/m³

DNEL

copper sulphate pentahydrate				
Workers / consumers	Route of exposure	Value	Effect	Source
Workers	Inhalation	1 mg/m³	Chronic effects systemic	ECHA
Consumers	Oral	41 µg/kg	Chronic effects systemic	ECHA

phosphoric acid . %				
Workers / consumers	Route of exposure	Value	Effect	Source
Workers	Inhalation	10.7 mg/m³	Chronic effects systemic	ECHA
Workers	Inhalation	1 mg/m³	Chronic effects local	ECHA
Consumers	Inhalation	4.57 mg/m³	Chronic effects systemic	ECHA
Consumers	Inhalation	360 µg/m³	Chronic effects local	ECHA
Consumers	Oral	100 µg/kg bw/24h	Chronic effects systemic	ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)				
Workers / consumers	Route of exposure	Value	Effect	Source
Workers	Inhalation	1 mg/m³	Chronic effects systemic	ECHA
Workers	Dermal	8.3 mg/kg bw/day	Chronic effects systemic	ECHA
Consumers	Oral	0.83 mg/kg bw/day	Chronic effects systemic	ECHA
Consumers	Inhalation	1.3 mg/m³	Chronic effects systemic	ECHA
Consumers	Dermal	8.3 mg/kg bw/day	Chronic effects systemic	ECHA

PNEC

copper sulphate pentahydrate		
Route of exposure	Value	Source
Freshwater environment	7.8 µg/l	ECHA
Marine water	5.2 µg/l	ECHA
Microorganisms in sewage treatment	0.23 mg/l	ECHA
Freshwater sediment	87 mg/kg of dry substance of sediment	ECHA
Sea sediments	676 mg/kg of dry substance of sediment	ECHA
Soil (agricultural)	65 mg/kg	ECHA

Potassium nitrate		
Route of exposure	Value	Source
Microorganisms in sewage treatment	18 mg/l	ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)		
Route of exposure	Value	Source
Freshwater environment	0.0206 mg/l	ECHA
Marine water	0.0061 mg/l	ECHA
Freshwater sediment	235.6 mg/kg	ECHA
Sea sediments	113 mg/kg	ECHA
Soil (agricultural)	106.8 mg/kg	ECHA
Microorganisms in sewage treatment	0.0052 mg/l	ECHA

8.2. Exposure controls

Take off contaminated clothing and wash before reuse. Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Safety glasses (EN166) or face protection (depending on the nature of the work performed).

Skin protection

Hand protection: product-resistant protective gloves (EN374). When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2. Collect spillage.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	blue
color intensity	transparent
Odour	characteristic
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	data not available
Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	0-0.5 (100% solution at 20-25 °C)
Kinematic viscosity	data not available
Solubility in water	data not available
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	
Density	1.47 g/cm³ at 20-25 °C
Relative vapour density	data not available
Particle characteristics	data not available

9.2. Other information

not available

SECTION 10: Stability and reactivity

10.1. Reactivity

The mixture is not reactive.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

The product is stable under normal conditions.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

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

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time.

Acute toxicity

Based on the available data, the criteria for classification of the mixture are not met.

Naturamer Phosphorus Glow								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	ATE		10633 mg/kg				Calculation of value	

copper sulphate pentahydrate								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	LD_{50}		481-482 mg/kg of dry substance		Rat			ECHA
Dermal	LD_{50}		2000 mg/kg bw		Rat			ECHA
Oral	ATE		481 mg/kg bw					

Manganese sulfate monohydrate								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	LD_{50}		2150 mg/kg		Rat			Žaliavos SDL
Oral	LC_{50}		2330 mg/kg		Mouse			Žaliavos SDL
Inhalation	LC_{50}		>4.45 mg/l	4 hours	Rat			Žaliavos SDL

phosphoric acid . %								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	LD_{50}		1518 mg/kg		Rat			SDL
Dermal	LD_{50}		>2000 mg/kg bw		Rat			SDL

Potassium nitrate								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	LD_{50}		2000 mg/kg bw		Rat			ECHA

Potassium nitrate								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Inhalation	LC_{50}		527 mg/m³ of air	4 hours	Rat			ECHA
Dermal	LD_{50}		5000 mg/kg bw		Rat (Rattus norvegicus)			ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	LD_{50}		920 mg/kg bw					ECHA
Dermal	LD_{50}	OECD 402	>2000 mg/kg		Rat			ECHA

Skin corrosion/irritation

Causes severe skin burns and eye damage.

copper sulphate pentahydrate				
Route of exposure	Result	Exposure time	Species	Source
Dermal	Not irritating			ECHA

Manganese sulfate monohydrate				
Route of exposure	Result	Exposure time	Species	Source
Dermal	No effect			Žaliavos SDL

phosphoric acid . %				
Route of exposure	Result	Exposure time	Species	Source
Dermal	Skin burns			ECHA

Potassium nitrate				
Route of exposure	Result	Exposure time	Species	Source
Dermal	No effect			ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)				
Route of exposure	Result	Exposure time	Species	Source
Dermal	Irritating		Rabbit	ECHA

Serious eye damage/irritation

Causes severe skin burns and eye damage.

copper sulphate pentahydrate				
Route of exposure	Result	Exposure time	Species	Source
Eye	Serious eye damage			ECHA

Manganese sulfate monohydrate				
Route of exposure	Result	Exposure time	Species	Source
Eye	Causes damage			Žaliavos SDL

phosphoric acid . %				
Route of exposure	Result	Exposure time	Species	Source
Eye	Irreversible damage			ECHA

Potassium nitrate				
Route of exposure	Result	Exposure time	Species	Source
Eye	No effect			ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)				
Route of exposure	Result	Exposure time	Species	Source
Eye	Serious eye damage			ECHA

Respiratory or skin sensitisation

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

copper sulphate pentahydrate					
Route of exposure	Result	Exposure time	Species	Sex	Source
	Indeterminate				ECHA

Manganese sulfate monohydrate					
Route of exposure	Result	Exposure time	Species	Sex	Source
Inhalation	Not sensitizing				Žaliavos SDL
Skin	Not sensitizing				Žaliavos SDL

phosphoric acid . %					
Route of exposure	Result	Exposure time	Species	Sex	Source
Dermal	Not sensitizing				ECHA
Inhalation	Not sensitizing				ECHA

Potassium nitrate					
Route of exposure	Result	Exposure time	Species	Sex	Source
Dermal	No effect				ECHA
Inhalation	Indeterminate				ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)					
Route of exposure	Result	Exposure time	Species	Sex	Source
Skin	Not sensitizing				ECHA

Germ cell mutagenicity

Based on the available data, the criteria for classification of the mixture are not met.

copper sulphate pentahydrate					
Result	Exposure time	Specific target organ	Species	Sex	Source
Indeterminate					ECHA

phosphoric acid . %					
Result	Exposure time	Specific target organ	Species	Sex	Source
No effect					ECHA

Potassium nitrate					
Result	Exposure time	Specific target organ	Species	Sex	Source
Indeterminate					ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)					
Result	Exposure time	Specific target organ	Species	Sex	Source
Negative					ECHA

Carcinogenicity

Based on the available data, the criteria for classification of the mixture are not met.

copper sulphate pentahydrate						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			ECHA

Manganese sulfate monohydrate						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			Žaliavos SDL

phosphoric acid . %						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			No effect			ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			ECHA

Reproductive toxicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

copper sulphate pentahydrate						
Effect	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			ECHA

Manganese sulfate monohydrate						
Effect	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			Žaliavos SDL

phosphoric acid . %						
Effect	Parameter	Value	Result	Species	Sex	Source
Developmental toxicity	NOAEL	370 mg/kg bw/day		Mouse		ECHA

Potassium nitrate						
Effect	Parameter	Value	Result	Species	Sex	Source
Effects on fertility	NOAEL	1500 mg/kg bw/day		Rat		ECHA
Developmental toxicity	NOAEL	1500 mg/kg bw/day		Rat		ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)						
Effect	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			ECHA

Toxicity for specific target organ - single exposure

Based on the available data, the criteria for classification of the mixture are not met.

copper sulphate pentahydrate						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			ECHA

Manganese sulfate monohydrate						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			Žaliavos SDL

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			ECHA

Toxicity for specific target organ - repeated exposure

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

copper sulphate pentahydrate						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			ECHA

Manganese sulfate monohydrate						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			Negative			Žaliavos SDL

phosphoric acid . %						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
Oral	NOAEL	322.88-492.77 mg/kg bw/day		Dog		ECHA
Oral	LOAEL	155 mg/kg bw/day		Rat		ECHA

Potassium nitrate						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
	NOAEL	1500 mg/kg bw/day		Rat		ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)						
Route of exposure	Parameter	Value	Result	Species	Sex	Source
			Indeterminate			ECHA

Aspiration hazard

Based on the available data, the criteria for classification of the mixture are not met.

Manganese sulfate monohydrate					
Route of exposure	Result	Exposure time	Species	Sex	Source
	Indeterminate				Žaliavos SDL

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)					
Route of exposure	Result	Exposure time	Species	Sex	Source
	Indeterminate				ECHA

11.2. Information on other hazards

Endocrine disrupting properties

Based on the available data, the criteria for classification of the mixture are not met. Does not contain any components that may cause endocrine disruption for humans.

Other information

not available

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

Acute toxicity

copper sulphate pentahydrate					
Parameter	Value	Exposure time	Species	Environment	Source
LC_{50}	193 µg/l	96 hours	Fish (Pimephales promelas)		ECHA
NOEC	66 µg/l	270 days	Fish (Pimephales promelas)		ECHA
EC_{10}	108 µg/l	72 hours	Algae (Pseudokirchneriella subcapitata)		ECHA

phosphoric acid . %					
Parameter	Value	Exposure time	Species	Environment	Source
EC_{50}	100 mg/l	48 hours	Aquatic invertebrates		ECHA
NOEC	56 mg/l	48 hours	Aquatic invertebrates		ECHA
EC_{50}	100 mg/l	72 hours	Algae		ECHA
NOEC	100 mg/l	72 hours	Algae (Selenastrum capricornutum)		ECHA
EC_{50}	1 g/l	3 hours	Microorganisms		ECHA
NOEC	1 g/l	3 hours	Microorganisms		ECHA

Potassium nitrate					
Parameter	Value	Exposure time	Species	Environment	Source
LC_{50}	100-1378 mg/l	4 days	Fish		ECHA

Potassium nitrate					
Parameter	Value	Exposure time	Species	Environment	Source
NOEC	100 mg/l	4 days	Fish		ECHA
EC_{50}	39-900 mg/l	4 days	Aquatic invertebrates		ECHA
EC_{50}	226 mg/l	72 hours	Aquatic invertebrates		ECHA
EC_{50}	490 mg/l	48 hours	Aquatic invertebrates		ECHA
EC_{50}	1.7 g/l	10 days	Algae		ECHA
EC_{50}	1 g/l	3 hours	Microorganisms		ECHA
EC_{10}	180 mg/l	3 hours	Microorganisms		ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)					
Parameter	Value	Exposure time	Species	Environment	Source
LC_{50}	1.5 mg/l	96 hours	Fish		ECHA
EC_{50}	0.75 mg/l	48 hours	Aquatic invertebrates		ECHA
NOEC	1.95 g/l		Microorganisms		ECHA
LC_{50}	102-35980 µg/l	4 days	Fish		ECHA
LC_{50}	330 µg/l	95 hours	Fish		ECHA
EC_{50}	105-2909 µg/l	48 hours	Aquatic invertebrates		ECHA
LC_{50}	110-68800 µg/l	4 days	Aquatic invertebrates		ECHA
EC_{50}	410 µg/l	10 days	Algae		ECHA

12.2. Persistence and degradability

Data for the mixture are not available.

Biodegradability

copper sulphate pentahydrate					
Parameter	Value	Exposure time	Environment	Result	Source
				Not biodegradable	ECHA

Manganese sulfate monohydrate					
Parameter	Value	Exposure time	Environment	Result	Source
	-				Žaliavos SDL

phosphoric acid . %					
Parameter	Value	Exposure time	Environment	Result	Source
				Biodegradable	SDL

Potassium nitrate					
Parameter	Value	Exposure time	Environment	Result	Source
	-				ECHA

12.3. Bioaccumulative potential

Data for the mixture are not available.

copper sulphate pentahydrate						
Parameter	Value	Exposure time	Species	Environment	Temperature [°C]	Source
						ECHA

Manganese sulfate monohydrate						
Parameter	Value	Exposure time	Species	Environment	Temperature [°C]	Source
	-					Žaliavos SDL

phosphoric acid . %						
Parameter	Value	Exposure time	Species	Environment	Temperature [°C]	Source
	0					SDL

Potassium nitrate						
Parameter	Value	Exposure time	Species	Environment	Temperature [°C]	Source
	-					ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)						
Parameter	Value	Exposure time	Species	Environment	Temperature [°C]	Source
	-					ECHA

12.4. Mobility in soil

Based on the available data, the criteria for classification of the mixture are not met. Does not contain any PMT or vPvM components.

copper sulphate pentahydrate			
Parameter	Value	Result	Source
		Low	ECHA

Manganese sulfate monohydrate			
Parameter	Value	Result	Source
	-		Žaliavos SDL

phosphoric acid . %			
Parameter	Value	Result	Source
		Low	SDL

Potassium nitrate			
Parameter	Value	Result	Source
	-		ECHA

zinc sulphate (hydrous) (mono-, hexa-and hepta hydrate)			
Parameter	Value	Result	Source
	158.5 l/kg		ECHA

12.5. Results of PBT and vPvB assessment

Based on the available data, the criteria for classification of the mixture are not met. Does not contain any PBT or vPvB components.

12.6. Endocrine disrupting properties

Based on the available data, the criteria for classification of the mixture are not met. Does not contain any components that may cause endocrine disruption in the environment.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

06 03 99 wastes not otherwise specified

SECTION 14: Transport information

14.1. UN number or ID number

UN 1760

14.2. UN proper shipping name

CORROSIVE LIQUID, N.O.S.

14.3. Transport hazard class(es)

8 Corrosive substances

14.4. Packing group

III

14.5. Environmental hazards

Yes.

14.6. Special precautions for user

None.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

Additional information

Hazard identification No.	**80**
UN number	**1760**
Classification code	C9
Safety signs	8+hazardous for the environment

Tunnel restriction code	(E)

Air transport - ICAO/IATA

Packaging instructions passenger	852
Cargo packaging instructions	856

Marine transport - IMDG

EmS (emergency plan)	F-A, S-B
MFAG	760

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Product contains reportable explosives precursors: Reporting of suspicious transactions, disappearances and thefts according to Regulation (EU) 2019/1148, Article 9. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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.

Guidelines for safe handling used in the safety data sheet

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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 doctor.
P391	Collect spillage.
P501	Dispose of container to in accordance with national regulations.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

Acute Tox.	Acute toxicity
ADR	European agreement concerning the international carriage of dangerous goods by road
Aquatic Acute	Hazardous to the aquatic environment
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EC_{10}	Concentration of a substance when it is affected 10 % of the population
EC_{50}	Concentration of a substance when it is affected 50 % of the population
Eye Dam.	Serious eye damage

Eye Irrit.	Eye irritation
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC_{50}	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD_{50}	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEL	Lowest observed adverse effect level
log Kow	Octanol-water partition coefficient
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
OEL	Occupational Exposure Limits
Ox. Sol.	Oxidising solid
PBT	Persistent, bioaccumulative and toxic
PMT	Persistent, mobile and toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very persistent and very bioaccumulative
vPvM	Very persistent and very mobile

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

First version of the dafety data sheet.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.