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SAFETY DATA SHEET

YaraVita Maize Pholate

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

Product identifier : YaraVita Maize Pholate
Product type : Solid (Powder.)
Product code : PYP69W
Uses
Area of application : Industrial applications, Professional applications Professional applications
Material uses : Fertilizers.
Supplier
Supplier's details : Yara Africa Fertilizers (Pty) Ltd
Address
Street : The Pivot at Montecasino, 2nd floor, Block C
No 1 Montecasino Boulevard, Fourways
Postal code : 2191
City : Johannesburg
Country : South Africa
P.O. Box Address
P.O. Box : PBX10/1077
Postal code : 2086
City : Johannesburg
Country : South Africa
Telephone number : +27(0)11011 9230
Fax no. : +27(0)11388 4459
e-mail address of person responsible for this SDS : infosa@yara.co.za
Emergency telephone number : +27 21 300 2732 (24/7)

National advisory body/Poison Center

Name : Poison Information Centre
Telephone number : +27 21 938-6084 / +27 21 931-6131

SECTION 2: Hazards identification

Classification of the substance or mixture.	: ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 2 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
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Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 39,8 %

GHS label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: H302 + H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H360 May damage fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure. (respiratory tract)
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

: P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/clothing and eye/face protection.
P260 Do not breathe dust.
P271 Use only outdoors or in a well-ventilated area.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P264+P265 Wash hands thoroughly after handling. Do not touch eyes.
P391 Collect spillage.

Response

- P301 IF SWALLOWED:
 P313 Get medical advice/attention.
 P330 Rinse mouth.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P332 + P313 If skin irritation occurs, seek medical advice/attention.
 P314-a Get medical attention if you feel unwell.
 P304 IF INHALED:
 P340 Remove person to fresh air and keep comfortable for breathing.
 P302 IF ON SKIN:
 P352 Wash with plenty of soap and water.
 P308 IF exposed or concerned:
 P313 Get medical attention.
 P305 IF IN EYES:
 P351 Rinse cautiously with water for several minutes.
 P338 Remove contact lenses, if present and easy to do. Continue rinsing.

Storage :

Disposal :

P405 Store locked up.

P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Additional information : None.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
tetrasodium ethylene diamine tetraacetate	>= 35 - <= 45	64-02-8
zinc sulphate (monohydrate)	>= 25 - <= 35	7446-19-7
disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-)	>= 10 - <= 15	14025-15-1
disodium octaborate tetrahydrate	>= 3 - <= 5	12280-03-4
copper sulphate pentahydrate	>= 3 - <= 5	7758-99-8
citric acid	>= 1 - <= 2	77-92-9
sodium hydroxide	>= 0,3 - <= 1	1310-73-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Remark : This product contains Boron (see section 7 and 11).

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Get medical attention immediately.
- Inhalation** : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Remove contaminated clothing and shoes. Get medical attention.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if you feel unwell. Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
- Skin contact** : Causes skin irritation.
- Ingestion** : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following: pain, watering, redness
- Inhalation** : Adverse symptoms may include the following: respiratory tract irritation, coughing
- Skin contact** : Adverse symptoms may include the following: irritation, redness
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- | | | |
|-----------------------------------|---|---|
| Notes to physician | : | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : | No specific treatment. |
| Protection of first-aiders | : | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

See toxicological information (Section 11)

SECTION 5: Firefighting measures

Extinguishing media

- | | | |
|---|---|--|
| Suitable extinguishing media | : | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | : | None identified. |
| Specific hazards arising from the chemical | : | This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
| Hazardous thermal decomposition products | : | Decomposition products may include the following materials: sulfur oxides, metal oxide/oxides, Avoid breathing dusts, vapors or fumes from burning materials., In case of inhalation of decomposition products in a fire, symptoms may be delayed. |
| Special protective actions for fire-fighters | : | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | : | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| Remark | : | Non-explosive. |

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- | | | |
|------------------------------------|---|--|
| For non-emergency personnel | : | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8). |
| For emergency responders | : | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| Environmental precautions | : | Avoid dispersal of spilled material and runoff and contact with |

soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

- | | |
|--------------------|---|
| Small spill | : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. |
| Large spill | : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |

Section 7. Handling and storage

Precautions for safe handling

Not for human or animal consumption.

- | | |
|---|---|
| Protective measures | : Put on appropriate personal protective equipment (see Section 8). Do not handle until all safety precautions have been read and understood. As a precaution, keep exposure as low as possible for pregnant women, children and workers in reproductive age. Avoid dust generation. Do not breathe dust. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Advice on general occupational hygiene | : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| Conditions for safe storage, including any incompatibilities | : Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in |

unlabeled containers. Use appropriate containment to avoid environmental contamination.

Specific recommendations to end users

- : Do not generate and inhale liquid fertilizer aerosols.

In addition to overalls, gloves and eye protection, use of efficient respiratory protection (P2/P3 respirators with a tight face seal) during discharge of fertilizer bags and maintenance of equipment is recommended to minimize inhalation exposure and to ensure safe-use during this activity (see section 8).

Risk assessments show safe use during normal spreading of fertilizers containing below 5% of boron by tractor (liquid or granular) and backpack (liquid).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
copper sulphate pentahydrate	DOL OEL (2022-09-29). TWA 2 mg/m ³ (as Cu) Form: Dusts and mists
sodium hydroxide	DOL OEL (2022-09-29). STEL 4 mg/m ³

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : A washing facility or water for eye and skin cleaning purposes should be present. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If operating conditions cause high dust concentrations to be produced, use dust goggles.
Recommended: Tightly-fitting goggles, Europe:, CEN: EN166,

Skin protection**Hand protection**

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasized that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties.

> 8 hours (breakthrough time): Protective gloves should be worn under normal conditions of use.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection

- : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

- : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Use respiratory protection with more than 94% efficiency (P2, P3 or N95) and a tight face seal, when risk of exposure to dust.

Personal protective equipment (Pictograms)

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance**Physical state**

- : Solid [Powder.]

Color

- : Blue.,

Odor

- : Odorless.

pH

- : 6,9 [Conc. (% w/w): 5 g/l]

Melting point/freezing point

- : 263 °C (505 °F)

Boiling point, initial boiling point, and boiling range

- : Not applicable.

Flash point

- : Not applicable.

Flammability

- : Non-flammable.

Lower and upper explosion limit/flammability limit	: Lower: Not applicable. Upper: Not applicable.
Vapor pressure	: Not applicable.
Relative vapor density	: Not applicable.
Relative density	: Not applicable.
Bulk density	: 1.030 kg/m ³
Density	: Not applicable.
Solubility(ies)	: soluble in water
Solubility in water	: 20 g/l
Miscibility with water	: Not relevant/applicable due to nature of the product.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not applicable.
Viscosity	: Kinematic: Not applicable.
Explosive properties	: Non-explosive.
Oxidizing properties	: None No oxidizing ingredients present.

Particle characteristics

Median particle size	: Not determined.
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Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid contamination by any source including metals, dust and organic materials.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information**Information on toxicological effects**

Acute toxicity

Product/ingredient name	Method	Species	Result	Exposure
tetrasodium ethylene diamine tetraacetate				
	OECD 401 LD50 Oral	Rat	1.780 mg/kg	Not applicable.
zinc sulphate (monohydrate)				
	OECD 401 LD50 Oral	Rat	926 mg/kg	Not applicable.
disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-)				
	OECD 403 LD50 Oral	Rat	890 mg/kg	Not applicable.
	LC50 Inhalation Dusts and mists	Rat	> 5,32 mg/l	4 h
	OECD 402 LD50 Dermal	Rat	> 5.000 mg/kg	Not applicable.
disodium octaborate tetrahydrate				
	LD50 Oral	Rat	2.550 mg/kg	Not applicable.
	OECD 403 LC50 Inhalation Dusts and mists	Rat	> 5 mg/l	4 h
	LD50 Dermal	Rabbit	> 5.000 mg/kg	Not applicable.
copper sulphate pentahydrate				
	OECD 401 LD50 Oral	Rat	481 mg/kg	Not applicable.
	OECD 402 LD50 Dermal	Rat	> 5.000 mg/kg	Not applicable.
citric acid				
	LD50 Oral	Rat	5.790 mg/kg	Not applicable.

Conclusion/Summary : Harmful by inhalation and if swallowed.

Irritation/Corrosion

Product/ingredient name	Method	Species	Result	Exposure
tetrasodium ethylene diamine tetraacetate				
	OECD 405 Eyes	Rabbit	Damage	
zinc sulphate (monohydrate)				
	Eyes	Rabbit	Severe irritant	
copper sulphate pentahydrate				
	OECD 405 Eyes	Rabbit	Severe irritant	
citric acid				
	Skin	Rabbit	Mild irritant	
	Eyes	Rabbit	Severe irritant	
sodium hydroxide				
	Skin	Rabbit	Severe irritant	

Conclusion/Summary

- Skin** : Causes skin irritation.
- Eyes** : Causes serious eye damage.
- Respiratory** : No known significant effects or critical hazards.

Sensitization**Conclusion/Summary**

- Skin** : No known significant effects or critical hazards.
- Respiratory** : No known significant effects or critical hazards.

Mutagenicity

- Conclusion/Summary** : No known significant effects or critical hazards.

Carcinogenicity

- Conclusion/Summary** : No known significant effects or critical hazards.

Reproductive toxicity

- Conclusion/Summary** : May damage fertility or the unborn child.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
citric acid	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
tetrasodium ethylene diamine tetraacetate	Category 2	inhalation	respiratory tract

Aspiration hazard

No known significant effects or critical hazards.

- Information on the likely routes of exposure** : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
- Skin contact** : Causes skin irritation.
- Ingestion** : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following: pain, watering, redness

- Inhalation** : Adverse symptoms may include the following: respiratory tract irritation, coughing
- Skin contact** : Adverse symptoms may include the following: irritation, redness
- Ingestion** : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Product/ingredient name	Method	Species	Result	Exposure
tetrasodium ethylene diamine tetraacetate				
	OECD 413 Sub-chronic NOAEL Inhalation	Rat	3 mg/m ³ Continuous	65 days 6 hours per day

- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : May damage fertility or the unborn child.
- Other effects** : May cause damage to organs through prolonged or repeated exposure. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following: pain, watering, redness
- Inhalation** : Adverse symptoms may include the following: respiratory tract irritation, coughing
- Skin contact** : Adverse symptoms may include the following: irritation, redness
- Ingestion** : No specific data.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
YaraVita Maize Pholate	1245,3 mg/kg	N/A	N/A	N/A	2,5 mg/l
tetrasodium ethylene diamine tetraacetate	1780 mg/kg	N/A	N/A	N/A	1,5 mg/l
zinc sulphate (monohydrate)	926 mg/kg	N/A	N/A	N/A	N/A

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate (2-)	890 mg/kg	N/A	N/A	N/A	N/A
disodium octaborate tetrahydrate	2550 mg/kg	N/A	N/A	N/A	N/A
copper sulphate pentahydrate	481 mg/kg	N/A	N/A	N/A	N/A
citric acid	5790 mg/kg	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Method	Species	Result	Exposure
tetrasodium ethylene diamine tetraacetate				
	Acute LC50 Fresh water	Fish	> 1.000 mg/l	96 h
zinc sulphate (monohydrate)				
	Acute LC50 Fresh water	Fish	0,1 - 1 mg/l	96 h
	Acute EC50 Fresh water	Daphnia	0,1 - 1 mg/l	48 h
disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-)				
	OECD 203 Acute LC50	Fish	555 mg/l	96 h
	OECD 202 Acute EC50	Daphnia	100,9 mg/l	48 h
disodium octaborate tetrahydrate				
	Acute LC50	Fish	350 mg/l	96 h
	Acute EC50	Daphnia	2.530 mg/l	48 h
	Acute LC10 Fresh water	Algae	115 mg/l	96 h
copper sulphate pentahydrate				
	Acute LC50 Fresh water	Fish	0,032 mg/l	96 h
	Acute NOEC Fresh water	Daphnia	0,029 mg/l	Not applicable.
citric acid				
	Acute LC50 Fresh water	Fish	> 100 mg/l	96 h
sodium hydroxide				
	Acute LC50 Fresh water	Fish	35 - 186 mg/l	96 h

Conclusion/Summary : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Conclusion/Summary : Readily biodegradable in plants and soils.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
tetrasodium ethylene diamine tetraacetate	5,01	1,80	low
disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-)	< 0	Not applicable.	low
disodium octaborate tetrahydrate	-0,757	Not applicable.	low
citric acid	-1,8	Not applicable.	low

Conclusion/Summary : The product does not show any bioaccumulation phenomena.

Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Mobility : Not available.

Other adverse effects : No known significant effects or critical hazards.

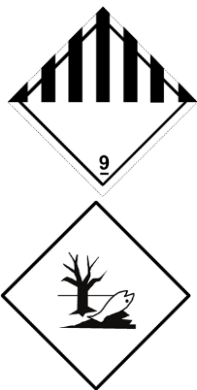
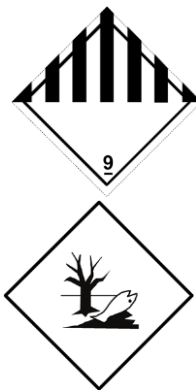
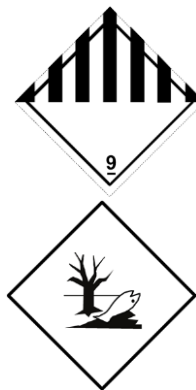
Section 13. Disposal considerations

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
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UN number	3077	3077	3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate, copper sulphate pentahydrate,)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate, copper sulphate pentahydrate,)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate, copper sulphate pentahydrate,)
Transport hazard class(es)	9 	9 	9 
Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes.

Additional information**IMDG**: **Emergency schedules (EmS)** F-A, S-F**14.6 Special precautions for user**

: Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments**Proper shipping name
Remarks**

: FERTILIZERS WITHOUT NITRATES

: **Solid bulk cargoes**
Harmful to the marine environment with regard to MARPOL Annex V: Yes
Material is hazardous only in bulk according to the IMSBC: No
IMSBC shipping group: C

Section 15. Regulatory information**Section 16. Other information**

Key to abbreviations

- : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 bw = Body weight
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 SUSMP - Standard Uniform Schedule of Medicine and Poisons
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method
TOXIC TO REPRODUCTION - Category 1B	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

Key data sources

- : EU REACH ECHA/IUCLID5 CSR.
 National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
 Sphera Solutions Inc., 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.Regulation (EC) No 1272/2008 Annex VI.

History

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Date of previous issue : 09.06.2020

Revision comments : The safety data sheet has been revised according to HCA 44348:2021.

Version : 4.0

Prepared by : Product Stewardship and Compliance (PSC).

|| Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.