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SAFETY DATA SHEET

YaraMila PANTHER

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

1.1 Product identifier

Product name : YaraMila PANTHER
Product code : PH368P
Product type : Solid
Other means of identification : UFI: RD81-90VE-F00X-MHCR

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

Identified uses
Industrial distribution. Industrial USE to formulate chemical product mixtures. Professional formulation of fertiliser products. Professional USE as fertiliser at Farm - loading and spreading. Professional USE as fertiliser in Greenhouse. Professional USE as liquid fertiliser in open field. Professional USE as fertiliser - maintenance of equipment.

Uses advised against	: Other non-specified industry
Reason	: Due to lack of related experience or data, the supplier cannot approve this use.

1.3 Details of the supplier of the safety data sheet

Address : Yara Hellas S.A.
Street : Syngrou Avenue
Nea Smyrni
Number : 137
Postal code : 17121
City : Athens
Country : Greece
Telephone number : +30 210 9370355
Fax no. : +30 210 9370357
e-mail address of person responsible for this SDS : info.hellas@yara.com

1.4 Emergency telephone number**National advisory body/Poison Center**

Name : Κέντρο Δηλητηριάσεων Κύπρου/Poison Control Center
Cyprus

Telephone number : 1401

Hours of operation : 24/7

Supplier

Emergency telephone number : +30 2111 983 182 (7/24)
(with hours of operation)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture.**

Product definition : Mixture

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

Classification : Eye Irrit. 2, H319
Repr. 1B, H360FD

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H319 Causes serious eye irritation.
H360FD May damage fertility. May damage the unborn child.

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.

Response : 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.
P337 If eye irritation persists:
P313 Get medical attention.

Hazardous ingredients : disodium tetraborate, anhydrous

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users. Applicable, Table 65.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

Additional information : Product forms slippery surface when combined with water.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
ammonium nitrate	REACH #: 01-2119490981-27 EC : 229-347-8 CAS : 6484-52-2	>= 35 - <= 45	Ox. Sol. 3, H272 Eye Irrit. 2, H319	-	[1]
potassium nitrate	REACH #: 01-2119488224-35 EC : 231-818-8 CAS : 7757-79-1	>= 10 - <= 15	Ox. Sol. 3, H272	-	[1]
ammonium chloride	REACH #: 01-2119489385-24 EC : 235-186-4 CAS : 12125-02-9 Index: 017-014-00-8	>= 5 - <= 7	Acute Tox. 4, H302 Eye Irrit. 2, H319	ATE [Oral] = 1.410 mg/kg	[1]
disodium tetraborate,	REACH #:	>= 1 - <= 2	Eye Irrit. 2, H319		[1]

anhydrous	01-2119490790-32 EC : 215-540-4 CAS : 1330-43-4 Index: 005-011-00-4		Repr. 1B, H360FD	-	
Calcium fluoride (CaF ₂)	REACH #: 01-2119491248-30 EC : 232-188-7 CAS : 7789-75-5	>= 1 - <= 2	Not classified.	-	[2]
zinc oxide	REACH #: 01-2119463881-32 EC : 215-222-5 CAS : 1314-13-2 Index: 030-013-00-7	>= 0,1 - <= 0,2	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]

See Section 16 for the full text of the H statements declared above.

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

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

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Rinse with plenty of running water. Check for and remove any contact lenses. If irritation persists, get medical attention.
- Inhalation** : If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. Get medical attention if you feel unwell. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with soap and water. Get medical attention if irritation develops.
- 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.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact	:	Adverse symptoms may include the following: pain or irritation, watering, redness
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	:	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Use flooding quantities of water for extinction.
Unsuitable extinguishing media	:	Do NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	:	The product itself is not combustible but it can support combustion, even in absence of air. On heating it melts and further heating can cause decomposition, releasing toxic fumes containing nitrogen oxides and ammonia.
Hazardous combustion products	:	Decomposition products may include the following materials: nitrogen oxides, sulfur oxides, phosphorus oxides, halogenated compounds, metal oxide/oxides, ammonia, Avoid breathing dusts, vapors or fumes from burning materials., In case of inhalation of decomposition products in a fire, symptoms may be delayed.

5.3 Advice for firefighters

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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 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. 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".
- 6.2 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).

6.3 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. Dispose of via a licensed waste disposal contractor.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 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. 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.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. 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. Keep away from: organic materials, oil and grease.

7.3 Specific end use(s)

Recommendations

- : 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

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Calcium fluoride (CaF ₂)	EU OEL (2000-06-01). TWA 2,5 mg/m ³

Recommended monitoring procedures

- : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following:
European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to

chemical agents for comparison with limit values and measurement strategy)
 European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)
 European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents)
 Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
ammonium nitrate	DNEL	Long term Dermal	5,12 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	36 mg/m ³	Workers	Systemic
ammonium chloride	DNEL	Long term Dermal	128,9 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	43,97 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	55,2 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	9,4 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term Oral	55,2 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Oral	55,2 mg/kg bw/day	General population [Consumers]	Systemic
disodium tetraborate, anhydrous	DNEL	Short term Inhalation	11,7 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	6,7 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	22326 mg/day	Workers	Systemic
Calcium fluoride (CaF ₂)	DNEL	Long term Inhalation	5 mg/m ³	Workers	Systemic
zinc oxide	DNEL	Long term Inhalation	5 mg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
ammonium nitrate	PNEC	Sewage Treatment Plant	18 mg/l	Assessment Factors
potassium nitrate	PNEC	Sewage Treatment Plant	18 mg/l	Assessment Factors
ammonium chloride	PNEC	Fresh water	0,25 mg/l	Assessment Factors
	PNEC	Marine water	0,025 mg/l	Assessment

				Factors
	PNEC	Intermittent release	0,43 mg/l	Assessment Factors
	PNEC	Soil	50,7 mg/kg dwt	Assessment Factors
disodium tetraborate, anhydrous		Marine water	1,35 mg/l	Assessment Factors
		Marine water sediment	9,1 mg/l	Assessment Factors
		Soil	5,4 mg/kg dwt	Not applicable.
		Sewage Treatment Plant	1,75 mg/l	Assessment Factors
Calcium fluoride (CaF ₂)	PNEC	Fresh water	0,37 mg/l	Assessment Factors
	PNEC	Marine water	0,022 mg/l	Assessment Factors
	PNEC	Sewage Treatment Plant	104,75 mg/l	Assessment Factors
	PNEC	Soil	21,8 mg/kg dwt	Assessment Factors
zinc oxide	PNEC	Fresh water	20,6 µg/l	Assessment Factors
	PNEC	Salt water	6,1 µg/l	Assessment Factors
	PNEC	Fresh water sediment	235,6 mg/kg	Assessment Factors
	PNEC	Sediment	113 mg/kg	Assessment Factors
	PNEC	Soil	106,8 mg/kg	Assessment Factors
	PNEC	Sewage Treatment Plant	52 µg/l	Assessment Factors

8.2 Exposure controls

Appropriate engineering controls

- : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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.
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.

- 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 respiratory protection with more than 94% efficiency (P2, P3 or N95) and a tight face seal, when risk of exposure to dust.
- 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.
- Personal protective equipment (Pictograms)** : 

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Solid (prills)
- Color** : Gray.,
- Odor** : Odorless.
- Melting point/freezing point** : 140 °C
- Initial boiling point and boiling range** : Not applicable.

- Flammability** : Non-flammable.

- Lower and upper explosion limit** : **Lower:** Not applicable.
Upper: Not applicable.

- Flash point** : Not applicable.

- Auto-ignition temperature** : Not applicable.

- Decomposition temperature** : Not applicable.

pH	:	4 - 7 [Conc. (% w/w): 100 g/l]
Viscosity	:	Kinematic: Not applicable.
Solubility(ies)	:	Soluble in the following materials: cold water
Water solubility	:	> 80 g/l
Partition coefficient: n-octanol/water	:	Not applicable.
Vapor pressure	:	Not applicable.
Relative vapour density	:	Not applicable.
Bulk density	:	1.000 - 1.100 kg/m ³
Explosive properties	:	Non-explosive.
Oxidizing properties	:	Non-oxidizer. UN Manual of Tests and Criteria, Section 39.

Particle characteristics

Median particle size	:	3 mm
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9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

<u>10.1 Reactivity</u>	:	No specific test data related to reactivity available for this product or its ingredients.
<u>10.2 Chemical stability</u>	:	The product is stable.
<u>10.3 Possibility of hazardous reactions</u>	:	Under normal conditions of storage and use, hazardous reactions will not occur.
<u>10.4 Conditions to avoid</u>	:	Avoid contamination by any source including metals, dust and organic materials.
<u>10.5 Incompatible materials</u>	:	alkalis combustible materials, reducing materials, organic materials, Acids
<u>10.6 Hazardous decomposition products</u>	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Method	Species	Result	Exposure
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ammonium nitrate				
	OECD 401 LD50 Oral	Rat	2.950 mg/kg	Not applicable.
	OECD 402 LD50 Dermal	Rat	> 5.000 mg/kg	Not applicable.
potassium nitrate				
	LD50 Oral	Rat	2.000 mg/kg	Not applicable.
	LD50 Dermal	Rat	> 5.000 mg/kg	Not applicable.
ammonium chloride				
	LD50 Oral	Rat	1.410 mg/kg	Not applicable.
	LD50 Dermal	Rat	> 5.000 mg/kg	Not applicable.
disodium tetraborate, anhydrous				
	LD50 Oral	Rat	2.000 mg/kg	Not applicable.
	LD50 Dermal	Rabbit	> 5.000 mg/kg	Not applicable.
Calcium fluoride (CaF ₂)				
	OECD 423 LD50 Oral	Rat	> 5.000 mg/kg	Not applicable.
	OECD 403 LC50 Inhalation Dusts and mists	Rat	> 5,07 mg/l	4 h
zinc oxide				
	LD50 Oral	Rat	> 5.000 mg/kg	Not applicable.
	LC50 Inhalation Dusts and mists	Rat	> 5,7 mg/l	4 h
	OECD 402 LD50 Dermal	Rat	> 5.000 mg/kg	Not applicable.

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

Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
YaraMila PANTHER	24310,3 mg/kg	N/A	N/A	N/A	N/A
ammonium nitrate	2950 mg/kg	N/A	N/A	N/A	N/A
ammonium chloride	1410 mg/kg	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Method	Species	Result	Exposure
ammonium nitrate				
	OECD 405 Eyes	Rabbit	Irritant	
potassium nitrate				
	OECD 404 Skin	Rabbit	Non-irritating.	
ammonium chloride				
	Eyes	Rabbit	Irritant	

Conclusion/Summary

Skin : No known significant effects or critical hazards.
Eyes : Causes serious eye irritation.

Respiratory : No known significant effects or critical hazards.

Sensitization

Product/ingredient name	Method	Species	Result
ammonium nitrate			
	OECD 429 Skin	Mouse	Not sensitizing

Conclusion/Summary

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

Mutagenicity

Product/ingredient name	Method	Test detail	Result
ammonium nitrate			
	OECD 473	Mammalian Toxicity - Genotoxicity - In vitro Mammalian Chromosome Aberration Test or Mammalian Bone Marrow Chromosomal Abberation Test or Mammalian Erythrocyte Micronucleus Test In vitro	Negative
	OECD 471	Bacteria In vitro	Negative

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

Carcinogenicity

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

Reproductive toxicity

Product/ingredient name	Method	Species	Result	Exposure
ammonium nitrate				
	OECD 422 Oral	Rat	Fertility effects- Negative Developmental- Negative NOAEL > 1500 mg/kg bw/day	28 days
ammonium chloride				
	Oral	Rat	Fertility effects- Negative Developmental- Negative 1500 mg/kg bw/day	-

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

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : Irritating to mouth, throat and stomach.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

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

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

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

Product/ingredient name	Method	Species	Result	Exposure
ammonium nitrate				
	OECD 422 Chronic NOAEL Oral	Rat	256 mg/kg	28 days
	OECD 412 Sub-acute NOEC Inhalation	Rat	> 185 mg/m ³	2 weeks 5 hours per day
ammonium chloride				
	Sub-chronic NOAEL Oral	Rat	1.695 mg/kg	13 weeks Repeated dose; 7 days per week

- 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.
- Effects on or via lactation** : No known significant effects or critical hazards.
- Other effects** : No known significant effects or critical hazards.

11.2. Information on other hazards

11.2.1 Endocrine disrupting properties : Not available.

11.2.2 Other information : Not available.

SECTION 12: Ecological information**12.1 Toxicity**

Product/ingredient name	Method	Species	Result	Exposure
ammonium nitrate				
	Acute LC50 Fresh water	Fish	447 mg/l	48 h
	Acute EC50 Fresh water	Daphnia	490 mg/l	48 h
	Acute EC50 Salt water	Algae	1.700 mg/l	10 d
potassium nitrate				
	OECD 203 Acute LC50 Fresh water	Fish	> 100 mg/l	96 h
	Acute EC50 Fresh water	Daphnia	490 mg/l	48 h
	Acute EC50 Marine water	Algae	> 1.700 mg/l	240 h
ammonium chloride				
	OECD 202 Acute EC50 Fresh water	Daphnia	136,6 mg/l	48 h
	Acute EC50 Fresh water	Algae	1.300 mg/l	5 d
disodium tetraborate, anhydrous				
	Acute LC50 Fresh water	Fish	> 100 mg/l	96 h
	Acute EC50 Fresh water	Daphnia	> 100 mg/l	48 h
	Acute EC50 Fresh water	Algae	> 100 mg/l	72 h
Calcium fluoride (CaF ₂)				
	Acute LC50 Fresh water	Fish	104,7 mg/l	96 h
	Acute EC50 Fresh water	Daphnia	50,94 mg/l	48 h
	Acute EC50 Fresh water	Algae	88,32 mg/l	96 h
zinc oxide				
	OECD 203 Acute LC50 Fresh water	Fish	0,1 - 1 mg/l	96 h
	OECD 202 Acute EC50 Fresh water	Daphnia	0,1 - 1 mg/l	48 h

	OECD 201 Acute IC50 Fresh water	Algae	0,136 mg/l	72 h
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Conclusion/Summary : No known significant effects or critical hazards.

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
ammonium chloride	-3,2	Not applicable.	low
disodium tetraborate, anhydrous	-1,53	Not applicable.	low
zinc oxide	Not applicable.	28.960,00	high

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

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties : Not available.

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

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

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.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
06 10 02*	wastes containing hazardous substances

Packaging**Methods of disposal**

- : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. Empty the bag by shaking to remove as much as possible of its contents. Empty bags may be disposed of as non-hazardous material or returned for recycling.

Special precautions

- : 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

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	Not applicable.	Not applicable.	Not applicable.	Not applicable.
14.3 Transport hazard class(es)	Not applicable.	Not applicable.	Not applicable.	Not applicable.
14.4 Packing group	Not applicable.	Not applicable.	Not applicable.	Not applicable.
14.5. Environmental hazards	No.	No.	No.	No.

Remark

- : A NPK fertilizer not liable to self-sustaining exothermic decomposition according to the S.1 trough test as defined in the recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, part III, section 38.

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.

14.7 Maritime transport in bulk according to IMO instruments

- Proper shipping name** : AMMONIUM NITRATE BASED FERTILIZER MHB
- Remarks** : **Solid bulk cargoes**
Harmful to the marine environment with regard to MARPOL Annex V: No Material is hazardous only in bulk according to the IMSBC:

Yes
IMSBC shipping group: B

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

The following components are listed:

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
disodium tetraborate, anhydrous	Toxic to reproduction	Recommended	ED/69/2013	2015-07-01

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII : Restricted to professional users. Applicable, Table 65.

- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Ozone depleting substances (1005/2009/EU)

None of the components are listed.

Prior Informed Consent (PIC) (649/2012/EU)

None of the components are listed.

Persistent Organic Pollutants

None of the components are listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

Other regulations : Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulations

Biocidal products regulation : Not applicable.

Notes : To our knowledge no other country or state specific regulations are applicable.

15.2 Chemical Safety Assessment : Complete.

SECTION 16: Other information

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- DMEL = Derived Minimal Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- PBT = Persistent, Bioaccumulative and Toxic
- vPvB = Very Persistent and Very Bioaccumulative
- bw = Body weight

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.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Eye Irrit. 2, H319	Calculation method
Repr. 1B, H360FD	Calculation method

Full text of abbreviated H statements

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H360FD	May damage fertility. May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Ox. Sol. 3	OXIDIZING SOLIDS - Category 3
Repr. 1B	TOXIC TO REPRODUCTION - Category 1B

Revision comments : The following sections contain new and updated information: 1.
Supplier's details

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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 provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein, since all materials may represent unknown hazards and should be used with caution. Final determination of the suitability of any material is the sole responsibility of the user.



**Annex to the extended Safety Data Sheet (eSDS) -
Exposure Scenario/Safe Use Information:**

Identification of the substance or mixture

Product definition : Mixture

Product name : YaraMila PANTHER

Exposure Scenario/Safe Use Information : Exposure Scenarios are not attached for corrosive or irritant hazards, relevant information on safe use is included in section 8. Boron compounds: Exposure Scenarios are not attached. Relevant information on safe use is included in section 7 and 8.

