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# SAFETY DATA SHEET

## YaraAmplix Procote Optimize

### Section 1. Identification

**Product identifier** : YaraAmplix Procote Optimize  
**Product type** : Liquid  
**Product code** : PYP1RL  
**Uses**  
**Area of application** : Professional applications  
**Material uses** : Fertilizers.

**Supplier**  
**Supplier's details** : Yara Canada Inc.

**Address**  
**Street** : 1874 Scarth Street  
**Number** : Ste 1800  
**Postal code** : S4P 4B3  
**City** : Regina  
**Country** : Canada

**Telephone number** : +1 306 525 7600  
**Fax no.** : +1 306 525 2942  
**e-mail address of person responsible for this SDS** : yna-hesq@yara.com  
**Emergency telephone number (with hours of operation)** : US: Chemtrec 24-hours Emergency Response: 1-800-424-9300  
Canada: 24 Hour Emergency service, CHEMTREC 1-800-424-9300

**National advisory body/Poison Center**  
**Name** : Poisons and Drug Information Service  
**Telephone number** : +1 403 944 1414, (800) 332 1414 (Alberta only)

### Section 2. Hazards identification

**Classification of the** : ACUTE TOXICITY (oral) - Category 4

substance or mixture.

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) - Category 2

**GHS label elements****Hazard pictograms**

:

**Signal word**

:

Warning

**Hazard statements**

:

H302  
H373Harmful if swallowed.  
May cause damage to organs through  
prolonged or repeated exposure.  
(kidneys)**Precautionary statements****Prevention**

:

P260  
P270Do not breathe vapor or spray.  
Do not eat, drink or smoke when using this  
product.**Response**

:

P264-a  
P314-aWash hands thoroughly after handling.  
Get medical attention if you feel unwell.**Additional information**

:

None.

**Section 3. Composition/information on ingredients****Substance/mixture**

:

Mixture

Ingredient name	% (w/w)	CAS number
1,2-Ethanediol	>= 80 - < 90	107-21-1

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

**Section 4. First aid measures****Description of necessary first aid measures****Eye contact**

:

Rinse with plenty of running water. Check for and remove any contact lenses. Get medical attention following exposure or if feeling unwell.

**Inhalation**

:

Avoid inhalation of vapor, spray or mist. If inhaled, remove to

- fresh air. Get medical attention following exposure or if feeling unwell.
- Skin contact** : Wash with soap and water. Continue to rinse for at least 10 minutes. Get medical attention if irritation develops. Get medical attention following exposure or if feeling unwell.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Get medical attention if you feel unwell.

**Most important symptoms/effects, acute and delayed****Potential acute health effects**

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Harmful if swallowed.

**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : Adverse symptoms may include the following: stomach pains

**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.

See toxicological information (Section 11)

## **Section 5. Fire-fighting 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** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials: 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

Remark : face-piece operated in positive pressure mode.  
: 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. Avoid breathing vapor or mist. 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).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. 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 breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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 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. 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. Bund storage facilities to prevent soil and water pollution in the event of spillage.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
1,2-Ethanediol	<p><b>CA Alberta Provincial (2009-07-01).</b> CEIL 100 mg/m<sup>3</sup></p> <p><b>CA British Columbia Provincial (2022-03-01).</b> TWA 10 mg/m<sup>3</sup> Form: Total, Aerosol STEL 20 mg/m<sup>3</sup> Form: Total, Aerosol CEIL 100 mg/m<sup>3</sup> Form: Total, Aerosol</p> <p><b>CA British Columbia Provincial (2010-09-01).</b> CEIL 50 ppm Form: Vapor</p> <p><b>CA Ontario Provincial (2020-07-02).</b> CEIL 10 mg/m<sup>3</sup> Form: Inhalable particulate matter, aerosol only</p> <p><b>CA Quebec Provincial (2000-01-12).</b> STEL 127 mg/m<sup>3</sup> 50 ppm Form: VAP_MIST</p> <p><b>CA Saskatchewan Provincial (2007-08-10).</b> CEIL 100 mg/m<sup>3</sup> Form: Aerosol</p> <p><b>CA Ontario Provincial (2020-07-02).</b> STEL 50 ppm Form: Vapour fraction. TWA 25 ppm Form: Vapour fraction.</p>

**Appropriate engineering** : If user operations generate dust, fumes, gas, vapor or mist,

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**controls**

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.  
**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**

- : In case of inadequate ventilation wear respiratory protection.  
**Recommended**  
Filter P2  
Europe:  
EN 143

**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

<b>Physical state</b>	: Liquid
<b>Color</b>	: Brown.,
<b>Odor</b>	: Odorless.
<b>pH</b>	: 7 - 8

**Melting point/freezing point** : < 0 °C (< 32 °F)

**Boiling point, initial boiling point, and boiling range** : > 100 °C (> 212 °F)

**Flash point** : Not applicable.

**Flammability** : Non-flammable.

**Lower and upper explosion limit/flammability limit** : **Lower:** Not applicable.  
**Upper:** Not applicable.

**Vapor pressure** : Not determined.

**Relative vapor density** : < 1 [Air = 1]

**Density** : 1.186 g/cm<sup>3</sup> @ 20 °C (68 °F)

**Solubility(ies)** : Miscible in water.

**Partition coefficient: n-octanol/water** : Not determined.

**Auto-ignition temperature** : Not determined.

**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 applicable.

## 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** : Under normal conditions of storage and use, hazardous

<b>reactions</b>	reactions will not occur.
<b>Conditions to avoid</b>	: Avoid contamination by any source including metals, dust and organic materials.
<b>Incompatible materials</b>	: No specific data.
<b>Hazardous decomposition products</b>	: 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
1,2-Ethanediol				
	LD50 Oral	Rat	7,712 mg/kg	Not applicable.

**Conclusion/Summary** : Harmful if swallowed.

#### Irritation/Corrosion

#### **Conclusion/Summary**

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



**Specific target organ toxicity (single exposure)**

No known significant effects or critical hazards.

**Specific target organ toxicity (repeated exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
1,2-Ethanediol	Category 2	oral	kidneys

**Aspiration hazard**

No known significant effects or critical hazards.

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

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : Adverse symptoms may include the following: stomach pains

**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**

**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : No known significant effects or critical hazards.  
**Other effects** : May cause damage to organs through prolonged or repeated exposure.

**Over-exposure signs/symptoms**

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.

**Ingestion** : Adverse symptoms may include the following: stomach pains

#### Numerical measures of toxicity

##### Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
1,2-Ethanediol	500 mg/kg	N/A	N/A	N/A	N/A

## Section 12. Ecological information

#### Toxicity

Product/ingredient name	Method	Species	Result	Exposure
1,2-Ethanediol				
	Acute LC50 Fresh water	Fish	> 72,860 mg/l	96 h

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

#### Persistence and degradability

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

#### Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
1,2-Ethanediol	-1.36	Not applicable.	low

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

#### 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

	<b>TDG Classification</b>	<b>DOT Classification</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.
<b>Transport hazard class(es)</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.
<b>Packing group</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.
<b>Environmental hazards</b>	No.	No.	No.	No.

### Additional information

#### 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** : Not applicable.

## Section 15. Regulatory information

### Canadian lists

**Canadian NPRI** : The following components are listed: 1,2-Ethanediol;  
**CEPA Toxic substances** : None of the components are listed.

### Inventory list

**New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted.

**Korea inventory**: All components are listed or exempted.

**China inventory (IECSC):** All components are listed or exempted.

**Taiwan Chemical Substances Inventory (TCSI):** All components are listed or exempted.

**United States inventory (TSCA 8b):** All components are active or exempted.

**Canada:** At least one component is not listed in DSL but all such components are listed in NDSL.

**Viet Nam:** All components are listed or exempted.

## 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
- : HPR = Hazardous Products Regulations
- : 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
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) - Category 2	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.

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