This Material Safety Data Sheet conforms to the requirements of ANSI Z400.1. - Canada

Safety Data Sheet

YaraVita Hydrophos

1. Product and company identification

Product name	:	YaraVita Hydrophos
Product type	:	liquid
Code	:	PYP59M

Uses

Area of application	:	Professional applications
Material uses	:	Fertilizers.

Supplier

Supplier's details		Yara Canada Inc. - Downstream TLP

Address

Street	:	1130 Sherbrooke Street West
Number	:	Suite 1050
Postal code	:	H3A 2M8
City	:	Montreal
Country	:	Canada
Telephone number	:	+1 514 849 9222
Fax no.	:	Not available.
e-mail address of person responsible for this SDS	:	Not available.
Emergency telephone number (with hours of operation)	:	24 Hour Emergency Service, (Canutec 613-996-6666)

National advisory body/Poison Center

Name	:	Poisons and Drug Information Service
Telephone number	:	+1 403 944 1414, (800) 332 1414 (Alberta only)
Validation date	:	09/16/2013
Print date	:	12/11/2013

2. Hazards identification

Emergency overview

Physical state	:	liquid
Color	:	Red.
Signal word	:	DANGER!
Hazard statements	:	CAUSES EYE AND SKIN BURNS.
Precautionary measures	:	Avoid breathing vapor or mist. Use only with adequate ventilation. Do

not get in eyes. Do not get on skin. Keep container tightly closed. Wash thoroughly after handling.

GHS label elements

Signal word : DANGER!

Hazard statements : Not applicable.

Potential acute health effects

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Vapor is strongly irritating to the eyes and respiratory system.

Ingestion : May cause burns to mouth, throat and stomach.

Skin : Corrosive to the skin. Causes burns.

Eyes : Corrosive to eyes. Causes burns.

Potential chronic health effects

Chronic effects : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Not available.

Medical conditions aggravated by over-exposure : None known.

See toxicological information (section 11)

3. Composition/information on ingredients

Name	CAS number	%
Phosphoric acid	7664-38-2	>=5 - <7

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.

4. First aid measures

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses. Get medical attention immediately. Chemical burns must be treated promptly by a physician.

Skin contact : Wash with soap and water. Get medical attention if irritation develops.

Inhalation : Avoid inhalation of vapor, spray or mist. If inhaled, remove to fresh air. Get medical attention if symptoms occur.

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 adverse health effects persist or are severe.

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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None identified.

Special exposure hazards : 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.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
phosphorus oxides
halogenated compounds
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 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.

Special remarks on fire hazards : Non-flammable.

Special remarks on explosion hazards : None.

6. Accidental release measures

Personal precautions : 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 vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

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 for 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). The spilled material may be neutralized with sodium carbonate,

sodium bicarbonate or sodium hydroxide. 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.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). 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. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. See also Section 8 for additional information on hygiene measures.

Storage : 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. Separate from alkalis. 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.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient	Exposure limits
Phosphoric acid	**CA Alberta Provincial (2009-07-01)** Notes: Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required. 15-minute occupational exposure limit 3 mg/m3 **CA Alberta Provincial (2004-04-30)** Notes: Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required. 8-hour Occupational exposure limit 1 mg/m3 **CA British Columbia Provincial (2004-08-01)** 8-hour time weighted average 1 mg/m3 **CA British Columbia Provincial (2004-08-01)** short-term exposure limit 3 mg/m3 **CA Ontario Provincial (1994-09-01)** time-weighted average exposure value 1 mg/m3 **CA Ontario Provincial (1994-09-01)** short-term exposure value 3 mg/m3 **CA Quebec Provincial (2000-01-12)** Time Weighted Average (TWA) 1 mg/m3 **CA Quebec Provincial (2000-01-12)** Short Term Exposure Limit (STEL) 3 mg/m3

Consult local authorities for acceptable exposure limits.

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 appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Engineering measures	:	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.
Hygiene measures	:	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. A washing facility or water for eye and skin cleaning purposes should be present.

Personal protection

Respiratory	:	Use a properly fitted, air-purifying or air-fed 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. Recommended: In case of inadequate ventilation wear respiratory protection. acid gas filter (Type E)
Hands	:	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. > 8 hours (breakthrough time): Protective gloves should be worn under normal conditions of use.
Eyes	:	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 or dusts. chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: Tightly-fitting goggles
Skin	:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
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.

9. Physical and chemical properties

Physical state	:	liquid
Flash point	:	Not determined.
Burning time	:	Not determined.
Burning rate	:	Not determined.
Auto-ignition temperature	:	Not determined.
Flammable limits	:	**Lower:** Not determined. **Upper:** Not determined.
Explosive properties	:	None.
Oxidizing properties	:	None.
Color	:	Red.

Odor	:	Not determined.
pH	:	1
Boiling/condensation point	:	Not determined.
Sublimation temperature	:	Not determined.
Melting/freezing point	:	< -20 °C (4 °F)
Relative density	:	1.479
Vapor pressure	:	Not determined.
Odor threshold	:	Not determined.
Evaporation rate	:	Not determined.
Viscosity	:	**Dynamic:** < 100 mPa.s
	:	**Kinematic:** Not determined.
Solubility	:	Not determined.

10. Stability and reactivity

Chemical stability	:	The product is stable.
Conditions to avoid	:	Avoid contamination by any source including metals, dust and organic materials.
Incompatible materials	:	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product / ingredient name	Result	Species	Dose	Exposure	References
Phosphoric acid					
	LD50 Oral	Rat	2,600 mg/kg 423 Acute Oral toxicity - Acute Toxic Class Method	-	IUCLID5

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

Chronic toxicity

Product / ingredient name	Result	Species	Dose	Exposure	References
Phosphoric acid	Sub-chronic NOAEL Oral	Rat	250 mg/kg OECD 422	54 days	IUCLID5

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

Irritation/Corrosion

Conclusion/Summary

Skin	:	Corrosive to the skin.
Eyes	:	Causes serious eye damage.

Respiratory : May be irritating to the respiratory system.

Sensitization

Conclusion/Summary

Skin : Corrosive to skin on contact.

Respiratory : No data available for this end-point, hence this classification is not considered to be applicable.

Carcinogenicity

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

Mutagenicity

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

Teratogenicity

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

Reproductive toxicity

Product / ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure	References
Phosphoric acid	-	Negative	-	Rat	Oral: > 500 mg/kg bw/day	54 days	IUCLID5
	Negative	-	Negative	Rat	Oral: > 410 mg/kg bw/day	10 days	IUCLID5
	Negative	-	Negative	Mouse	Oral: > 370 mg/kg bw/day	10 days	IUCLID5

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

IDLH : No data available.

12.Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product / ingredient name	Result	Species	Exposure	References
Phosphoric acid				
	Acute EC50 > 100 mg/l Fresh water OECD 202	Aquatic invertebrates. - Daphnia	48 h	IUCLID5
	Acute EC50 > 100 mg/l Fresh water OECD 201	Aquatic plants - Heterosigma akashiwo	72 h	IUCLID5

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

Persistence/degradability

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

Partition coefficient: n-octanol/water : Not available.

Mobility : Not available.

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

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.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14.Transport information

Regulation: UN Class	
14.1 UN number	3264
14.2 UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (orthophosphoric acid,)
14.3 Transport hazard class(es)	8 
14.4 Packing group	III
14.5 Environmental hazards	No.
Additional information **Environmental hazards**	**: UN Class** **:** No.

Regulation: IMDG	
14.1 UN number	3264
14.2 UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (orthophosphoric acid,)
14.3 Transport hazard class(es)	8 
14.4 Packing group	III
14.5 Environmental hazards	No.
14.6 Additional information **Marine pollutant**	**: IMDG** **:** No.

IMDG Code Segregation group	: SG01
Emergency schedules (EmS)	: F-A, S-B

Regulation: IATA	
14.1 UN number	3264
14.2 UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (orthophosphoric acid,)
14.3 Transport hazard class(es)	8 
14.4 Packing group	III
14.5 Environmental hazards	No.
14.6 Additional information	: **IATA**
Marine pollutant	: No.
Passenger and Cargo Aircraft	
Quantity limitation	: 5.00 L
Packaging instructions	: 852
Cargo Aircraft	
Quantity limitation	: 60.00 L
Packaging instructions	: 856

Regulation: DOT Classification	
14.1 UN number	3264
14.2 UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (orthophosphoric acid,)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environmental hazards	No.
14.6 Additional information	: **DOT Classification**
Environmental hazards	: No.
Limited quantity	: 0.00
Packaging instruction	: 203

Regulation: TDG Class	
14.1 UN number	3264
14.2 UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (orthophosphoric acid,)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environmental hazards	No.
14.6 Additional information	: **TDG Class**
Environmental hazards	: No.
Limited quantity	: 5
Special provisions	: 16

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.'

IMSBC : Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Proper shipping name : Nitric acid (less than 70%)
Ship type : 2
Pollution category : Y

15.Regulatory information

Canada

WHMIS (Canada) : Class E: Corrosive material

Canadian lists

Canadian NPRI : None of the components are listed.
CEPA Toxic substances : None of the components are listed.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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

International lists

Philippines inventory (PICCS): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Korea inventory: Not determined.
Japan inventory: Not determined.
China inventory (IECSC): Not determined.
Australia inventory (AICS): All components are listed or exempted.
Canada inventory: Not determined.
Malaysia Inventory (EHS Register): Not determined.
Taiwan inventory (CSNN): Not determined.
United States inventory (TSCA 8b): Not determined.
EC INVENTORY (EINECS/ELINCS): All components are listed or exempted.

16.Other information

Key to abbreviations :
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
bw = Body weight
CEPA = Canadian Environmental Protection Act
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IDLH = Immediately Dangerous to Life or Health
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NPRI = National Pollutant Release Inventory
UN = United Nations

References : EU REACH IUCLID5 CSR.
National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of

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