

TruPhos ManZin

SECTION 1. IDENTIFICATION

Product Identifier	TruPhos ManZin
Other Means of Identification	Fertilizer
Recommended Use	The user should seek the advice of the county agricultural representative or a professional agricultural consultant.
Restrictions on Use	None known.
Manufacturer/Supplier Identifier	NutriAg Limited, 39 Gail Grove, Toronto, Ontario, M9M 1M5
Emergency Phone No.	Canutec, 613-996-6666, 24 hours
SDS No.	0092
Date of Preparation	June 16, 2015

SECTION 2. HAZARD IDENTIFICATION

Classification

Corrosive to metals - Category 1; Acute toxicity (Inhalation) - Category 4; Skin irritation - Category 2; Eye irritation - Category 2A; Specific target organ toxicity (repeated exposure) - Category 2; Aquatic hazard (Acute) - Category 2

Label Elements



Signal Word:

Warning

Hazard Statement(s):

May be corrosive to metals.

Harmful if inhaled.

Causes skin and eye irritation.

May cause damage to organs through prolonged or repeated exposure.

Toxic to aquatic life.

Contains 27-28% of ingredients with unknown toxicity (Dermal)

Contains 40-41% of ingredients with unknown toxicity (Inhalation)

Precautionary Statement(s):

Prevention:

Keep only in original container.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash hands and skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Wear eye protection/face protection.

Wear protective gloves.

IF ON SKIN: Wash with plenty of water.

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IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Call a POISON CENTRE or doctor if you feel unwell.
 Get medical advice or attention if you feel unwell.
 Specific treatment (see supplemental first aid instruction on this label).
 If skin irritation occurs: Get medical advice or attention.
 If eye irritation persists: Get medical advice or attention.
 Take off contaminated clothing and wash it before reuse.
 Absorb spillage to prevent material damage.
Storage:
 Store in corrosive resistant container with a resistant inner liner.
Disposal:
 Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards
 Hazard Not Otherwise Classified (HNOC).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Phosphoric acid (85%)	7664-38-2	13-14	N/A	
Phosphoric acid, manganese(2++) salt (2:1)	18718-07-5	13-14	N/A	
Withheld as trade secret	CBI	10-11	N/A	
Phosphoric acid, zinc salt (2:1), dihydrate	13598-37-3	3-4	N/A	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air.

Skin Contact

Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause moderate to severe irritation. If on skin: may cause moderate to severe irritation. If inhaled: causes mild irritation.

Immediate Medical Attention and Special Treatment

Target Organs

Eyes, skin, respiratory system.

Special Instructions

Not applicable.

Medical Conditions Aggravated by Exposure

Dermatitis.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

Not applicable.

Specific Hazards Arising from the Product

Does not burn.

Special Protective Equipment and Precautions for Fire-fighters

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Large spills or leaks: dike spilled product to prevent runoff.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Transfer equipment should be constructed of chemical-resistant plastic or stainless steel. Do not store in aluminum or steel containers. Wear chemically protective equipment during handling. Use in a well-ventilated area. Do not breathe vapours or mists. Avoid contact with eyes, skin and clothing. Do not wear contact lenses while handling this material. Wash thoroughly after handling. Keep away from extreme heat and flame. Use caution when opening containers.

Conditions for Safe Storage

Store in an area that is: ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Empty containers may contain hazardous residue. Store separately. Keep closed. Follow all precautions given on this safety data sheet.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Phosphoric acid (85%)	1 mg/m3	3 mg/m3				

Appropriate Engineering Controls

General ventilation is usually adequate. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

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Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Basic Physical and Chemical Properties**

Appearance	Clear brown liquid.
Odour	Odourless
Odour Threshold	Not available
pH	2 - 3 (1% solution)
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.41 - 1.42 at 20 °C (68 °F)
Solubility	Soluble in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Liquid
Surface Tension	Not available

SECTION 10. STABILITY AND REACTIVITY**Reactivity**

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Freezing. Incompatible materials.

Incompatible Materials

Incompatible with aluminum and steel.

Hazardous Decomposition Products

During a fire, or when heated to decomposition, irritating/toxic phosphorus oxides, such as phosphorus pentoxide may be generated.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin contact; skin absorption; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Phosphoric acid (85%)	0.84 mg/L (rabbit) (4-hour exposure)	1530 mg/kg (rat)	2740 mg/kg (rabbit)
Phosphoric acid, zinc salt (2:1), dihydrate		300-2000 mg/kg (rat)	
Phosphoric acid, manganese(2++) salt (2:1)		> 2000 mg/kg (rat)	
Withheld as trade secret	7.85 mg/L (rat) (4-hour exposure) (vapour)	730 mg/kg (rat)	

Skin Corrosion/Irritation

Causes skin irritation.

Serious Eye Damage/Irritation

Causes serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause irritation to the respiratory tract.

Skin Absorption

Not Classified.

Ingestion

Not Classified.

Aspiration Hazard

Not classified.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause damage to organs If inhaled.

Respiratory and/or Skin Sensitization

Not classified.

Carcinogenicity

Not classified.

Reproductive Toxicity

Development of Offspring

Not Classified.

Sexual Function and Fertility

Not Classified.

Effects on or via Lactation

Not Classified.

Germ Cell Mutagenicity

Not classified.

Interactive Effects

Not Classified.

SECTION 12. ECOLOGICAL INFORMATION

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Ecotoxicity

Toxic to aquatic life,
May cause long lasting harmful effects to aquatic life.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Phosphoric acid (85%)	138 mg/L (96-hour)			
Phosphoric acid, zinc salt (2:1), dihydrate	0.14-0.26 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour)			

Persistence and Degradability

May cause long-term adverse effects in the environment.

Bioaccumulative Potential

Not Established.

Mobility in Soil

Not established.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable federal, provincial, and local regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	1805	Phosphoric Acid Solution	8	III
IATA (Air)	1805	Phosphoric Acid Solution	8	III
US DOT	1805	Phosphoric Acid Solution	8	III

Other Information IMDG: UN# 1805 Phosphoric Acid Solution, Class 8, PGIII

Proof of Dangerous Goods Classification

Date of Classification October 31, 2019

Classification corrosive to metals

Classification Method 49 CFR 173.137 and UN Manual of Tests and Criteria, Section 37

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

CEPA - National Pollutant Release Inventory (NPRI)

Part 1A. (Phosphoric acid, manganese(2++) salt (2:1))

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

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SECTION 16. OTHER INFORMATION

SDS Prepared By	NutriAg Limited
Phone No.	416-636-1555
Date of Preparation	June 16, 2015
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Revision Indicators	Version 5.1 The following SDS content was changed on November 25, 2016: SECTION 2. HAZARD IDENTIFICATION; Classification; Label Elements. SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS; Ingredient Information. The following SDS content was changed on October 31, 2019: SECTION 2. HAZARD IDENTIFICATION; Classification; Label Elements. SECTION 14. TRANSPORT INFORMATION; Shipping Information; Other Information; Classification; Classification Method.
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS).
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