



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name Phosphoric Acid 85% Solution
CAS # Mixture
Product use Fertilizer. Detergent. Water treatment.
Manufacturer SODROX Chemicals Ltd.
7040 Wellington Road 124, R.R. #6
Guelph, ON N1H 6J3 CA
Business Phone: 519-837-2330
Fax: 519-837-3300
Emergency Phone: 1-800-363-6824

2. Hazards Identification

Emergency overview DANGER
CAUSES EYE BURNS. CAUSES SKIN BURNS.
MAY BE FATAL IF SWALLOWED OR INHALED.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Eyes Causes chemical burns. May cause blindness.

Skin Causes chemical burns.

Inhalation Inhalation of mist may cause respiratory tract irritation, coughing or headache.

Ingestion Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Target organs Eyes. Respiratory system. Skin.

Chronic effects Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

Signs and symptoms The product causes burns of eyes, skin and mucous membranes.

OSHA Regulatory Status This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential environmental effects See section 12.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Phosphoric acid	7664-38-2	60 - 100

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 20 minutes. Obtain medical attention immediately.

Skin contact Immediately flush with cool water for 20 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists.

Inhalation If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Ingestion Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

General advice If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear impervious gloves and chemical splash goggles. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties Not flammable by WHMIS/OSHA criteria.

Extinguishing media

Suitable extinguishing media Treat for surrounding material.

Unsuitable extinguishing media Not available

Protection of firefighters

Specific hazards arising from the chemical Not available

Protective equipment for firefighters Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products May include and are not limited to: Oxides of phosphorus.

Explosion data

Sensitivity to mechanical impact Not available

Sensitivity to static discharge Not available

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

Methods for containment

Stop leak if you can do so without risk.

Methods for cleaning up

Should not be released into the environment. Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

7. Handling and Storage

Handling

DANGER -- CORROSIVE

Use good industrial hygiene practices in handling this material.

Do not get in eyes, on skin or on clothing.

Use only with adequate ventilation.

Avoid breathing vapors or mists of this product.

Wash thoroughly after handling.

Storage

Keep out of the reach of children. Store in a tightly closed container in a cool, dry and dark place away from incompatible materials. Keep from freezing.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)

Exposure Limits

Phosphoric acid

ACGIH-TLV

TWA: 1 mg/m³

STEL: 3 mg/m³

OSHA-PEL

TWA: 1 mg/m³

Engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection

Wear chemical goggles and face shield.

Hand protection

Impervious gloves. Confirm with reputable supplier first.

Skin and body protection

Use of an impervious apron is recommended.

Respiratory protection

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

General hygiene considerations

Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear
Color	Colourless
Form	Syrupy Liquid
Odor	Odourless
Odor threshold	Not available
Physical state	Liquid
pH	0 - 1 (1% solution in water)
Melting point	Not available
Freezing point	-5.80 °F (-21 °C)
Boiling point	316.40 °F (158 °C)
Pour point	Not available
Evaporation rate	Not available
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Flammability limits in air, lower, % by volume	Not applicable
Flammability limits in air, upper, % by volume	Not applicable
Vapor pressure	5.76 MmHg @ 20°C
Vapor density	Not available
Specific gravity	1.69 @ 20°C (H2O = 1)
Octanol/water coefficient	Not available
Solubility (H2O)	Soluble in cold water
Viscosity	Not available
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	Reacts violently with alkaline material. This product may react with reducing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Heat. Do not mix with other chemicals.
Incompatible materials	Caustics. Oxidizers. Bases. Reducing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of phosphorus.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Phosphoric acid	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Phosphoric acid	1530 mg/kg rat

Effects of acute exposure

Eye	Causes chemical burns. May cause blindness.
Skin	Causes chemical burns.
Inhalation	Inhalation of mist may cause respiratory tract irritation, coughing or headache.
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	Non-hazardous by WHMIS/OSHA criteria.
Mutagenicity	Non-hazardous by WHMIS/OSHA criteria.

Reproductive effects	Non-hazardous by WHMIS/OSHA criteria.
Teratogenicity	Non-hazardous by WHMIS/OSHA criteria.
Name of Toxicologically Synergistic Products	Not available

12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data		
Phosphoric acid	7664-38-2	96 Hr LC50 Gambusia affinis: 3 - 3.5 mg/L
Ecotoxicity - Water Flea - Acute Toxicity Data		
Phosphoric acid	7664-38-2	12 Hr EC50 Daphnia magna: 4.6 mg/L
Persistence / degradability	Not available	
Bioaccumulation / accumulation	Not available	
Mobility in environmental media	Not available	
Environmental effects	Harmful to aquatic life.	
Aquatic toxicity	Not available	
Partition coefficient	Not available	
Chemical fate information	Not available	
Other adverse effects	Not available	

13. Disposal Considerations

Disposal instructions	Review federal, state/provincial, and local government requirements prior to disposal.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

Proper shipping name	Phosphoric acid solution
Hazard class	8
UN number	1805
Packing group	III
Additional information:	
Special provisions	A7, IB3, N34, T4, TP1



Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name	PHOSPHORIC ACID, LIQUID
Hazard class	8
UN number	1805
Packing group	III



15. Regulatory Information

Canadian federal regulations 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.

Canada - WHMIS - Ingredient Disclosure List

Phosphoric acid 7664-38-2 1 %

WHMIS status Controlled

WHMIS classification Class E - Corrosive Material

WHMIS labeling



Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Phosphoric acid 7664-38-2 5000 Lb final RQ; 2270 kg final RQ

U.S. - CWA (Clean Water Act) - Hazardous Substances

Phosphoric acid 7664-38-2 Present

CERCLA (Superfund) reportable quantity

Phosphoric acid: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance Yes

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Hazardous substance

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Phosphoric acid 7664-38-2 Present

U.S. - Louisiana - Reportable Quantity List for Pollutants

Phosphoric acid 7664-38-2 5000 Lb final RQ; 2270 kg final RQ

U.S. - Massachusetts - Right To Know List

Phosphoric acid 7664-38-2 Present

U.S. - Minnesota - Hazardous Substance List

Phosphoric acid 7664-38-2 Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Phosphoric acid 7664-38-2 sn 1516

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Phosphoric acid 7664-38-2 5000 Lb RQ (air); 100 lb RQ (land/water)

U.S. - Pennsylvania - RTK (Right to Know) List

Phosphoric acid 7664-38-2 Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Phosphoric acid 7664-38-2 Toxic; Flammable

Inventory name

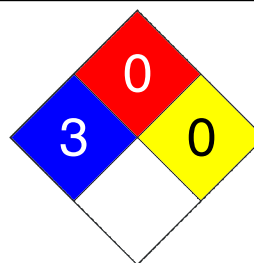
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/	3
Flammability		0
Physical Hazard		0
Personal Protection		X



Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

12-Jan-2012

Effective date

15-Mar-2012

Expiry date

15-Mar-2015

Prepared by

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Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

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