



Section 01 - Identification

Product Identifier	Pristine Part B
Other Means of Identification	None
Product Use and Restrictions on Use	Chlorine dioxide generation.
Initial Supplier Identifier	Advance Chemicals Ltd. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
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Section 02 - Hazard Identification

GHS-Classification

Skin Corrosion/Irritation	Category 1B
Serious Eye Damage/Eye Irritation	Category 1

Physical Hazards

Corrosive to Metals	Category 1
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Danger

Hazard Statements

H314 – Causes severe skin burns and eye damage.
H290 – May be corrosive to metals.

Pictograms



Precautionary Statements

P405 – Store locked up.
P234 – Keep only in original container.
P260 – Do not breathe mist, vapours or spray.
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P280 – Wear protective gloves, protective clothing, eye protection, and face protection.

P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363 – Wash contaminated clothing before reuse.

P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P270 – Do not eat, drink or smoke when using this product.

P301 +P330 + P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P310 – Immediately call a POISON CENTER or doctor/physician.

P390 – Absorb spillage to prevent material damage.

P501 - Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Phosphoric Acid	7664-38-2	5-20%	Not Available
Water	7732-18-5	80-95%	

Section 04 - First Aid Measures

Inhalation	Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention if you feel unwell.
Skin Contact / Absorption	Remove contaminated clothing. Rinse skin with lukewarm, gently flowing water for 30 minutes. Seek immediate medical attention. Completely decontaminate clothing, shoes and leather goods before reuse or discard.
Eye Contact	Immediately flush eye(s) with lukewarm, gently flowing water for 30 minutes while forcibly holding the eyelids open to ensure complete irrigation of the eye tissue. If a contact lens is present, remove only if easy to do so. Neutral saline solution may be given as soon as it is available. Seek immediate medical attention.
Ingestion	Never give anything by mouth if victim is rapidly losing consciousness, is unconscious or convulsing. Have victim rinse mouth with water. Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration.
Additional Information	Not Available

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media	Use extinguishing agent suitable for surrounding fire.
Unsuitable Extinguishing Media	Not Available
Specific Hazards Arising From the Chemical	Phosphoric acid can react with most metals to produce hydrogen gas, which may explode if ignited. During a fire, irritating/toxic phosphorus oxides may be generated.
Special Protective Equipment for Fire-Fighters	Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
Further Information	Not Available

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Flush with water to remove any residue.
Environmental Precautions	Prevent material from entering sewers or waterways.
Methods and Materials for Containment and Cleaning Up	SMALL SPILLS: Neutralize with sodium bicarbonate or a mixture of soda ash/slaked lime. Shovel residue into suitable, labelled containers for proper disposal. LARGE SPILLS: Recover liquid if it can be done safely. Place in suitable, labelled containers. Neutralize the remaining solution with lime.

Section 07 - Handling and Storage

Precautions for Safe Handling	This material is a CORROSIVE. Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Avoid generating dusts and mists. Prevent the release of dusts, mists and vapors into the workplace air. Use the smallest possible amounts in a well-ventilated area, separate from the storage area. Inspect containers for damage or leaks before handling.
Conditions for Safe Storage	Store in a cool, dry, well-ventilated area, out of direct sunlight. Store away from incompatible materials.
Incompatibilities	Strong caustics, strong oxidizing agents, reducing agents, organic peroxides, azo compounds, epoxides, aldehydes, metals powders or sheets, chloride, stainless steel, fluorides, halogenated organics, cyanides, sulfides, mercaptans, nitrides, metal phosphides, acetylides, silicides, carbides, nitromethane, sodium tetrahydroborate, poly(ethylene oxide) derivatives, alcohols, glycols, amides, amines, carbamates, esters, ketones, phenols, cresols, organophosphates, unsaturated halides.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Phosphoric Acid	ACGIH	TLV-TWA	1 mg/m ³
	ACGIH	TLV-STEL	3 mg/m ³
	OSHA	PEL-TWA	1 mg/m ³
	OSHA	PEL-STEL	3 mg/m ³

Engineering Control(s)

Ventilation Requirements	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.
Other	Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Protective Equipment

Eyes/Face	Chemical goggles. A face shield may also be necessary.
Hand Protection	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Skin and Body Protection	Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse. Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.
Respiratory Protection	NIOSH/OSHA RECOMMENDATIONS FOR PHOSPHORIC ACID CONCENTRATIONS IN AIR: Up to 25 mg/m ³ : (APF=25) SAR operated in a continuous flow mode. Up to 50 mg/m ³ : (APF=50) Full-facepiece respirator with an N100, R100, or P100 filter; or full-facepiece SCBA; or full-facepiece SAR.

Up to 1,000 mg/m³:
(APF=2,000) Positive pressure, full-facepiece SAR.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS:
(APF=10,000) Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.

ESCAPE:
(APF=50) Full-facepiece respirator with high-efficiency particulate filter(s); or escape-type SCBA.

NOTE: The IDLH concentration for phosphoric acid is 1,000 mg/m³.

Thermal Hazards

Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Liquid
Colour	Colourless
Odour	Similar to acid
Odour Threshold	Not Applicable

Property

pH	2
Melting Point/Freezing Point	Not Available
Initial Boiling Point and Boiling Range	Decomposes
Flash Point	Not Applicable
Evaporation Rate	Not Applicable
Flammability	Non-Flammable
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Vapour Pressure (mm Hg, 20°C)	Not Applicable
Vapour Density (Air=1)	Not Applicable
Relative Density	Not Available
Solubility(ies)	Soluble in water
Partition Coefficient: n-octanol/water	Log P _{ow} = -0.77
Auto-ignition Temperature	Not Available
Decomposition Temperature	213°C
Viscosity	Not Available
Explosive Properties	None

Specific Gravity (Water=1)	1.063
% Volatiles by Volume	Not Available
Formula	C ₆ H ₈ O ₇
Molecular Weight	192.13

Section 10 - Stability and Reactivity

Reactivity	May also attack porcelain, and granite ware when hot and earthenware and glass above 200°C.
Stability	Normally stable.
Possibility of Hazardous Reactions	None reported.
Conditions to Avoid	Heat.
Incompatible Materials	Strong caustics, strong oxidizing agents, reducing agents, organic peroxides, azo compounds, epoxides, aldehydes, metals powders or sheets, chloride, stainless steel, fluorides, halogenated organics, cyanides, sulfides, mercaptans, nitrides, metal phosphides, acetylides, silicides, carbides, nitromethane, sodium tetrahydroborate, poly(ethylene oxide) derivatives, alcohols, glycols, amides, amines, carbamates, esters, ketones, phenols, cresols, organophosphates, unsaturated halides.
Hazardous Decomposition Products	Toxic phosphorus oxides.

Section 11 - Toxicological Information

Acute Toxicity

Component	Oral LD₅₀	Dermal LD₅₀	LC₅₀
Phosphoric Acid (20%)	7.57 g/kg (rat)	6.3 g/kg (rabbit)	1.05 g/m ³ (rat, 4hr)

Chronic Toxicity – Carcinogenicity

Component	IARC
Phosphoric Acid	IARC has not evaluated the carcinogenicity of this chemical.

Skin Corrosion/Irritation	Corrosive. Capable of producing severe burns, blister, ulcers and permanent scarring.
Ingestion	May cause burns to the mouth, throat, esophagus and stomach.
Inhalation	Mists may be irritating to the nose, throat and respiratory tract.
Serious Eye Damage/Irritation	Corrosive. Capable of producing serious eye burns and permanent damage, including blindness.
Respiratory or Skin Sensitization	Does not meet the criteria for a skin or respiratory sensitizer.
Germ Cell Mutagenicity	The limited information located does not suggest that phosphoric acid solutions are mutagenic.
Reproductive Toxicity	Phosphoric acid is not known to cause developmental toxicity.
STOT-Single Exposure	May cause respiratory irritation.
STOT-Repeated Exposure	Not Available
Aspiration Hazard	Not Available
Synergistic Materials	Not Available

Section 12 - Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Phosphoric Acid	EC ₅₀ (Pseudokirchneriella subcapitata, 72hr): 32.0mg/L	LC ₅₀ (Oryzias latipes, 96hr): 75.1mg/L	EC ₅₀ (Daphnia magna, 48hr): >376mg/L
Biodegradability	Expected to be readily biodegradable.		
Bioaccumulation	No bioaccumulation expected.		
Mobility	Mobile in soil.		
Other Adverse Effects	Dangerous to aquatic life in high concentrations. Phosphate has indirect long term effect on the ecosystems due to eutrophication.		

Section 13 - Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 - Transport Information

UN Number	UN1805	
UN Proper Shipping Name	PHOSPHORIC ACID SOLUTION	
Transport Hazard Class(es)	8	
Packaging Group	III	
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.	
Special Precautions	Not Available	
Transport in Bulk	Not Available	
Additional Information	<u>Packing Group</u>	<u>Limited Quantity Index</u>
	III	5 L

TDG

Other	Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.
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TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 - Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 - Other Information

Preparation Date

December 14, 2015

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.

Attention: Receiver of the chemical goods / SDS coordinator

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If you have any questions or concerns please call our customer service center.

References

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) HSDB
- 6) ECHA
- 7) PAN

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