



SILVER FERN CHEMICAL, INC.

Safety Data Sheet

Phosphoric Acid 105%

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name	• Polyphosphoric acid 105%
Synonyms	• Phospholeum; Tetrphosphoric acid
CAS Number	• 8017-16-1
SDS Number/Grade	• 65
Molecular Formula	• $H(PO_3H)_nOH$

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s)	Intended for use in the production of phosphates, phosphate esters and the polyphosphorylation of polyols. This material acts as a catalyst in organic reactions such as rearrangement, polymerization and dehydration. Also used to strengthen or fortify weak acids.
-----------------------------------	--

1.3 Details of the supplier and of the safety data sheet

Manufacturer/Distributor	Silver Fern Chemical, Inc. 2226 Queen Anne Ave N. Suite C Seattle, WA 98109 1-866-828-3384 info@silverfernchemical.com www.silverfernchemical.com
---------------------------------	---

1.4 Emergency telephone number

INFO-TRAC +1-800-535-5053;
Outside USA & Canada +1-352-323-3500

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

- CLP
- Corrosive to Metals 1 - H290
Skin Corrosion 1C - H314
- DSD/DPD
- Corrosive (C)
R34

2.2 Label Elements

CLP

DANGER



- Hazard statements**
- H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage.

Precautionary statements

- Prevention**
- P234 - Keep only in original container.
 - P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
 - P264 - Wash thoroughly after handling.
 - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- Response**
- P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 - P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P310 - Immediately call a POISON CENTER or doctor/physician.
 - P321 - Specific treatment, see supplemental first aid information.
 - P363 - Wash contaminated clothing before reuse.
 - P390 - Absorb spillage to prevent material damage.

- Storage/Disposal**
- P405 - Store locked up.
 - P406 - Store in corrosive resistant/ container with a resistant inner liner.
 - P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



- Risk phrases**
- R34 - Causes burns.

- Safety phrases**
- S36 - Wear suitable protective clothing.
 - S37 - Wear suitable gloves.
 - S39 - Wear eye/face protection.
 - S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other Hazards

- CLP
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.
- DSD/DPD
- This product is considered dangerous according to the European Directive 67/548/EEC.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Corrosive to Metals 1 - H290
Skin Corrosion 1C - H314

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- May be corrosive to metals - H290
Causes severe skin burns and eye damage. - H314

Precautionary statements

- Prevention**
- Keep only in original container. - P234
Do not breathe dust/fume/gas/mist/vapours/spray. - P260
Wash thoroughly after handling. - P264
Wear protective gloves/protective clothing/eye protection/face protection. - P280
- Response**
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. - P301+P330+P331
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. - P303+P361+P353
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
Immediately call a POISON CENTER or doctor/physician. - P310
Specific treatment, see supplemental first aid information. - P321
Wash contaminated clothing before reuse. - P363
Absorb spillage to prevent material damage. - P390

- Storage/Disposal**
- Store locked up. - P405
Store in corrosive resistant/ container with a resistant inner liner. - P406
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Corrosive - E

2.2 Label elements

WHMIS



- Corrosive - E

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information

- There is limited data available for 8017 -16-1, polyphosphoric acid. This substance was classified using data from phosphoric acid 7664 -38-4.

Section 3 - Composition/Information on Ingredients

3.1 Substances

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Polyphosphoric acid	CAS:8017-16-1 EC Number:232-417-0	> 99%	NDA	EU DSD/DPD: Self Classified: C; R34 EU CLP: Self Classified: Skin Corr. 1C, H314; Met. Corr. 1, H290 OSHA HCS 2012: Skin Corr. 1C; Met. Corr. 1	NDA

3.2 Mixtures

- Material does not meet the criteria of a mixture in accordance with Regulation (EC) No 1272/2008.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- Administer oxygen if breathing is difficult. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Give artificial respiration if victim is not breathing. Move victim to fresh air.

Skin

- For minor skin contact, avoid spreading material on unaffected skin. In case of contact with substance, immediately flush skin with running water for at least 15 minutes. Wash skin with soap and water. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 15 minutes. Seek immediate medical attention, preferably with an ophthalmologist. If the physician is not immediately available, eye irrigation should be continued for an additional 15 minutes. If it is necessary to transport the patient to a physician and the eye needs to be bandaged, use a dry sterile cloth pad and cover both eyes.

Ingestion

- If swallowed give 2-3 glasses of water if victim is conscious and alert. Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. Obtain medical attention immediately if ingested. Do not use mouth-to-mouth method if victim ingested the substance. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Persons attending the victim should avoid direct contact with heavily contaminated clothing and vomitus. Wear impervious gloves while decontaminating skin and hair.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

4.4 Other information

- Call 911 or emergency medical service. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media • Not combustible. Use extinguishing media suitable for surrounding fire.

Unsuitable Extinguishing Media • None known.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • Not combustible.
Under fire conditions, toxic, corrosive fumes are emitted.

Hazardous Combustion Products • Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive fumes.

5.3 Advice for firefighters

- Keep unauthorized personnel away.
Evacuate residents who are downwind of fire.
Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.
Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.
Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions • Ventilate enclosed areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures • Keep unauthorized personnel away. Dike spill using absorbent or impervious materials such as earth, sand or clay. Dike or retain dilution water or water from firefighting for later disposal.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures • Exercise caution during neutralization as considerable heat may be generated. Neutralize spill area with soda ash, sodium bicarbonate or lime. Flush neutralized spill with copious amounts of water.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling • Do not get on skin or in eyes. Avoid breathing vapors and mists. Do not ingest. Handle and open container with care. Use only with adequate ventilation. Use caution when combining with water; DO NOT add water to corrosive liquid, ALWAYS add corrosive liquid to water while stirring to prevent release of heat, steam and fumes.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep away from incompatible materials. Store locked up. Keep container/package tightly closed in a cool, well-ventilated place. Ventilate enclosed areas. This material is corrosive to common metals such as mild steel, copper, brass and bronze and may generate flammable hydrogen gas as a result of this reaction. Recommended container material: stainless steel (Type 316ELC) with plastic or corrosive resistant inner liner.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines • No exposure limits were available for polyphosphoric acid - exposure limits for phosphoric acid are provided below.

Exposure Limits/Guidelines						
	Result	ACGIH	Argentina	Australia	Austria	Belgium
Phosphoric acid (7664-38-2)	STELs	3 mg/m3 STEL	3 mg/m3 STEL [CMP-CPT]	3 mg/m3 STEL	2 mg/m3 STEL [KZW] (4 X 15 min)	2 mg/m3 STEL
	TWAs	1 mg/m3 TWA	1 mg/m3 TWA [CMP]	1 mg/m3 TWA	Not established	1 mg/m3 TWA
	MAKs	Not established	Not established	Not established	1 mg/m3 TWA [TMW]	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	China	Czech Republic	Denmark	Egypt	Finland
Phosphoric acid (7664-38-2)	STELs	3 mg/m3 STEL	Not established	Not established	3 mg/m3 STEL	2 mg/m3 STEL
	TWAs	1 mg/m3 TWA	1 mg/m3 TWA	1 mg/m3 TWA	Not established	1 mg/m3 TWA
	Ceilings	Not established	2 mg/m3 Ceiling	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	France	Germany DFG	Germany TRGS	Greece	Hong Kong
Phosphoric acid (7664-38-2)	STELs	0.5 ppm STEL [VLCT] (indicative limit); 2 mg/m3 STEL [VLCT] (indicative limit)	Not established	Not established	3 mg/m3 STEL	3 mg/m3 STEL
	TWAs	0.2 ppm TWA [VME] (indicative limit); 1 mg/m3 TWA [VME] (indicative limit)	Not established	2 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, inhalable fraction, exposure factor 2)	1 mg/m3 TWA	Not established
	Ceilings	Not established	4 mg/m3 Peak (inhalable fraction)	Not established	Not established	Not established
	MAKs	Not established	2 mg/m3 TWA MAK (inhalable fraction)	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Hungary	India	Indonesia	Ireland	Israel
Phosphoric acid (7664-38-2)	TWAs	1 mg/m3 TWA [AK]	1 mg/m3 TWA	1 mg/m3 TWA	1 mg/m3 TWA	1 mg/m3 TWA
	STELs	2 mg/m3 STEL [CK]	3 mg/m3 STEL	Not established	2 mg/m3 STEL	3 mg/m3 STEL

Exposure Limits/Guidelines (Con't.)						
	Result	Italy	Japan	Korea	Malaysia	Mexico
Phosphoric acid (7664-38-2)	TWAs	1 mg/m3 TWA	1 mg/m3 OEL	1 mg/m3 TWA (Serial No. 459)	1 mg/m3 TWA	1 mg/m3 TWA LMPE-PPT
	STELs	2 mg/m3 STEL	Not established	3 mg/m3 STEL (Serial No. 465)	Not established	3 mg/m3 STEL [LMPE-CT]
Exposure Limits/Guidelines (Con't.)						
	Result	Netherlands	New Zealand	NIOSH	Norway	OSHA
Phosphoric acid (7664-38-2)	TWAs	1 mg/m3 TWA	1 mg/m3 TWA	1 mg/m3 TWA	1 mg/m3 TWA	1 mg/m3 TWA
	STELs	2 mg/m3 STEL	Not established	3 mg/m3 STEL	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Philippines	Poland	Portugal	Singapore	South Africa
Phosphoric acid (7664-38-2)	STELs	Not established	2 mg/m3 STEL [NDSch]	3 mg/m3 STEL [VLE-CD]	3 mg/m3 STEL	3 mg/m3 STEL
	TWAs	1 mg/m3 TWA	1 mg/m3 TWA [NDS]	1 mg/m3 TWA [VLE-MP]	1 mg/m3 PEL	1 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Spain	Sweden	Switzerland	Taiwan	United Kingdom
Phosphoric acid (7664-38-2)	MAKs	Not established	Not established	1 mg/m3 TWA [MAK]	Not established	Not established
	STELs	2 mg/m3 STEL [VLA-EC]	3 mg/m3 STV	2 mg/m3 STEL [KZW] (4 X 15)	Not established	2 mg/m3 STEL
	TWAs	1 mg/m3 TWA [VLA-ED] (indicative limit value; it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound)	1 mg/m3 LLV	Not established	1 mg/m3 TWA	1 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Venezuela				
Phosphoric acid (7664-38-2)	STELs	3 mg/m3 STEL [LEB]				
	TWAs	1 mg/m3 TWA [CAP]				

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear appropriate eye and face protection. An emergency eye wash must be readily accessible to the work area. Ensure safety shower is available near all areas of bulk storage, delivery and use.

Hands

- Wear protective gloves selected with regard to both durability as well as permeation resistance.

Skin/Body

- Wear acid resistant clothing. If acid above 60 C (140 F) wear thermal protection underneath acid resistant suit.

General Industrial Hygiene

- Do not get in eyes or on skin or clothing. Wash thoroughly with soap and water after

Considerations

handling and before eating, drinking, or using tobacco. Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

MSHA = Mine Safety and Health Administration

NIOSH = National Institute of Occupational Safety and Health

OEL = Occupational Exposure Limit(s)

OSHA = Occupational Safety and Health Administration

PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

STEL = Short Term Exposure Limits are based on 15-minute exposures

STEV = Short Term Exposure Value

Germany TRGS = Technische Regeln für Gefahrstoffe

NAB = Threshold Values (Indonesia)

TWAEV = Time-Weighted Average Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Colorless to yellow to brown viscous liquid.
Color	Colorless to yellow to brown.	Odor	Data lacking
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point	Refer to Product data sheet for specific information.
Decomposition Temperature	Data lacking	pH	< 1
Specific Gravity/Relative Density	1.92 to 2.08 Water=1 @ 25 C(77 F)	Density	16 to 17.3 lbs/gal @ 25 C(77 F)
Water Solubility	Soluble	Viscosity	Data lacking
Explosive Properties	Data lacking	Oxidizing Properties:	Data lacking
Volatility			
Vapor Pressure	< 1 mmHg (torr) @ 20 C(68 F)	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	Not flammable	UEL	NA
LEL	NA	Autoignition	Not relevant
Flammability (solid, gas)	Not relevant.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Incompatible materials. Moisture. Excess heat.

10.5 Incompatible materials

- Water, strong bases, metals. This material is corrosive to common metals such as mild steel, copper, brass and bronze and may generate hydrogen gas as a result of reaction. Reacts with water to generate heat and forms phosphoric acid. The reaction is not violent.

10.6 Hazardous decomposition products

- Oxides of phosphorus.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Other Material Information • No test data is available for polyphosphoric acid (8017 -16-1), so test data for phosphoric acid (7664-38-2) is provided.

	CAS	
Polyphosphoric acid 105%-118%	8017-16-1	Acute Toxicity: Ingestion/Oral-Rabbit LD50 • 2740 mg/kg • Comments: Data for phosphoric acid; Ingestion/Oral-Rat LD50 • 1530 mg/kg • Comments: Data for phosphoric acid; Inhalation-Rat LC50 • >850 mg/m ³ 1 Hour(s) • Comments: Data for Phosphoric acid; Irritation: Eye-Rabbit • Severe irritation, irreversible, burns (corrosive) • Comments: Data for phosphoric acid; Skin-Rabbit • Severe irritation, irreversible, burns (corrosive) • Comments: Data for phosphoric acid

GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin corrosion/Irritation	EU/CLP • Skin Corrosion 1C OSHA HCS 2012 • Skin Corrosion 1C
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-RE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-SE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met

Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met

Route(s) of entry/exposure • Inhalation, Skin, Eye, Ingestion

Potential Health Effects

Inhalation

- Acute (Immediate)** • May cause corrosive burns.
- Chronic (Delayed)** • No data available.

Skin

- Acute (Immediate)** • Causes severe skin burns and eye damage.
- Chronic (Delayed)** • No data available.

Eye

- Acute (Immediate)** • Corrosive. Can cause permanent damage to the cornea, blindness.
- Chronic (Delayed)** • No data available.

Ingestion

- Acute (Immediate)** • Causes corrosion, burns to mouth and esophagus, abdominal pain, chest pain, nausea, vomiting, diarrhea, seizures. Aspiration of the swallowed or vomited product can cause severe pulmonary complications.
- Chronic (Delayed)** • No data available.

Carcinogenic Effects

- This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

Key to abbreviations

LD = Lethal Dose
TC = Toxic Concentration

Section 12 - Ecological Information

12.1 Toxicity

- No data found for product.

12.2 Persistence and degradability

- No data found for product.

12.3 Bioaccumulative potential

- No data found for product.

12.4 Mobility in Soil

- No data found for product.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been carried out.

12.6 Other adverse effects

Ecological Fate

- No data found for product.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. This material is considered an EPA hazardous waste. EPA "RCRA" Hazardous Waste Code: "C" Corrosive.

Packaging waste

- Dispose of this container to hazardous or special waste collection point.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN3264	Corrosive liquid, acidic, inorganic, n.o.s (Polyphosphoric acid)	8	III	NDA
TDG	UN3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Polyphosphoric acid)	8	III	NDA
IMO/IMDG	UN3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Polyphosphoric acid)	8	III	NDA
IATA/ICAO	UN3264	Corrosive liquid, acidic, inorganic, n.o.s (Polyphosphoric acid)	8	III	NDA

14.6 Special precautions for user

- None known.

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

- Not relevant.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications

- Acute

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Phosphoric acid	7664-38-2	Yes	No	Yes	Yes	No
Polyphosphoric acid	8017-16-1	Yes	No	Yes	Yes	No
Inventory (Con't.)						
Component	CAS	New Zealand	Philippines PICCS	TSCA		
Phosphoric acid	7664-38-2	Yes	Yes	Yes		
Polyphosphoric acid	8017-16-1	Yes	Yes	Yes		

Canada

Labor

Canada - WHMIS - Classifications of Substances

- | | | |
|-----------------------|-----------|---------------------|
| • Polyphosphoric acid | 8017-16-1 | Not Listed |
| • Phosphoric acid | 7664-38-2 | E (including <=85%) |

Canada - WHMIS - Ingredient Disclosure List

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	1 %

Environment**Canada - CEPA - Priority Substances List**

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

Germany**Environment****Germany - TA Luft - Types and Classes**

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

Germany - Water Classification (VwVwS) - Annex 1

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	ID Number 392, hazard class 1 - low hazard to waters

Germany - Water Classification (VwVwS) - Annex 3

• Polyphosphoric acid	8017-16-1	ID Number 5102, hazard class 1 - low hazard to waters
• Phosphoric acid	7664-38-2	Not Listed

Philippines**Other****Philippines - Priority Chemical List**

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

Singapore**Other****Singapore - Corrosive and Explosive Substances - Corrosive Substances**

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - CAA (Clean Air Act) - Class II Ozone Depletors

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

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

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	5000 lb final RQ; 2270 kg final RQ

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Developmental Toxicity Warning

Product may contain traces of Arsenic (≤ 50 ppm) and Lead (≤ 10 ppm), which are known to the state of California to cause developmental harm.

U.S. - California - Proposition 65 - Cancer Warning

Product may contain traces of Lead (≤ 10 ppm), which is known to the state of California to cause cancer.

U.S. - California - Proposition 65 - Carcinogens List

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Polyphosphoric acid	7664-38-2	Not Listed
• Phosphoric acid	8017-16-1	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Polyphosphoric acid	8017-16-1	Not Listed
• Phosphoric acid	7664-38-2	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date • 26/August/2014

Preparation Date • 26/August/2014

Disclaimer/Statement of Liability • The information herein is given in good faith but no warranty, expressed or implied, is made.

Key to abbreviations

NDA = No Data Available

DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.