

Phosphoric Acid 0-68-0

Section 1. Identification

Product identifier : Phosphoric Acid 0-68-0

Other means of identification : Synonym: Superphosphoric Acid
Product code : 2515-14077
Historic MSDS #: 14077

Product type : Liquid.

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

Identified uses	
Manufacture of specialty fertilizers. Manufacture of chemical products.	
Uses advised against	Reason
Product is not intended for consumer use. Reserved for industrial and professional use only.	Risk assessment.

Supplier's details : Agrium Wholesale
13131 Lake Fraser Drive, S.E.
Calgary, Alberta, Canada, T2J 7E8

Agrium U.S. Inc.
Suite 1700, 4582 South Ulster St.
Denver, Colorado, U.S.A., 80237

Company phone number (North America):
1-800-403-2861 (Customer Service)

Emergency telephone number (with hours of operation) : Agrium 24 Hr Emergency Telephone Numbers:
English:
Transportation Emergencies: 1-800-792-8311
Medical Emergencies: 1-303-389-1653

French or Spanish:
Transportation or Medical Emergencies: 1-303-389-1654

Section 2. Hazard identification

Classification of the substance or mixture : CORROSIVE TO METALS - Category 1
SKIN CORROSION - Category 1B
SERIOUS EYE DAMAGE - Category 1
CARCINOGENICITY (inhalation) - Category 1A

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS label elements
Hazard pictograms :



Signal word : Danger

Hazard statements : May be corrosive to metals.
Causes severe skin burns and eye damage.
May cause cancer if inhaled.

Precautionary statements
General :

Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Section 2. Hazard identification

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep only in original packaging. Wash hands thoroughly after handling.
- Response** : Absorb spillage to prevent material damage.
 IF exposed or concerned: Get medical attention.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
 IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
- Storage** : Store locked up. Store in a corrosion resistant container with a resistant inner liner.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : None known.
- Other hazards which do not result in classification** : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Multi-constituent substance

Ingredient name	% (w/w)	CAS number
Orthophosphoric acid	94 - 95	7664-38-2
Water	3 - 4	7732-18-5
Sulfuric acid	2 - 3	7664-93-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Eye contact** : CORROSIVE. Begin eye irrigation immediately. All eye exposures to acid require medical evaluation following decontamination. Immediately rinse eyes with large quantities of water or saline for a minimum of 20-30 minutes depending on severity of exposure. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. Call an ambulance for transport to hospital. Continue eye irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or doctor.
- Inhalation** : CORROSIVE. If mists or vapors are present in unknown or excessive concentrations, rescuers must wear appropriate respiratory protection and a suit resistant to acids (Level B or C). REMOVE PERSON TO FRESH AIR. Watch closely for signs of wheezing and breathing difficulties. Maintain an open airway. If not breathing, begin CPR. Oxygen may be administered by trained personnel. Affected persons who have stopped breathing or are having difficulty breathing or are unconscious need immediate medical attention. Call an ambulance for transport to hospital. For additional advice call the medical emergency number on this SDS or your poison center or doctor.

Section 4. First-aid measures

- Skin contact** : CORROSIVE. Causes severe burns. Immediately begin rinsing the affected areas with water. Remove contaminated clothing and shoes. Affected areas should be rinsed for a minimum of 20 - 30 minutes or longer depending on severity of exposure. Luke-warm water is recommended for continued irrigation to prevent hypothermia. Conscious persons without breathing difficulties may benefit from prolonged irrigation in a fixed shower or bathing facility prior to hospital transport. Call an ambulance for transport to hospital. Continue skin irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or doctor.
- Ingestion** : CORROSIVE. May cause severe burns to the mouth, throat, and stomach. If the affected person requires cardiopulmonary resuscitation, avoid mouth to mouth contact. Do not induce vomiting. If vomiting occurs, attempt to keep head lower than the chest so that vomit does not enter the lungs. Wash face and mouth with water to remove visible material. If the exposed person is conscious and can swallow, give 1-2 sips of water. Do not give anything else by mouth. Loosen tight clothing such as collar, tie, belt or waistband to prevent any breathing restrictions. For signs of breathing difficulties, refer to the INHALATION section. Call an ambulance for transportation to hospital. For additional advice, call the medical emergency number on this safety data sheet or your poison center or doctor.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Corrosive to eyes on contact. Causes serious eye damage.
- Inhalation** : Irritating to the respiratory system. May cause breathing difficulties.
- Skin contact** : Corrosive to the skin. Causes severe burns.
- Ingestion** : Corrosive to the digestive tract. May cause burns to the mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
coughing
wheezing and breathing difficulties
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
throat and stomach pain
difficulty swallowing
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Phosphoric acid is an acid which may cause coagulative necrosis. Treatment is symptomatic and supportive. The extent of injury depends on duration of exposure and concentration of liquid. Do not attempt to use chemicals to neutralize the exposure. 24 Hr Medical Emergency telephone number for professional support: English: 1-303-389-1653; French or Spanish: 1-303-389-1654.
- Specific treatments** : Outcomes can be improved by minimizing time to decontamination and extending decontamination times to reduce tissue damage. Expert opinion indicates extended decontamination is required to remove corrosive chemicals. Skin and eye decontamination should be performed for a minimum of 20 - 30 minutes. Extended decontamination times may be required depending on the exposure. To avoid hypothermia, irrigation water should be maintained at a comfortable temperature. If the patient is not in extremis, it may be necessary to delay transport to emergency

Section 4. First-aid measures

care facilities to ensure adequate decontamination time. However, early patient transport may be necessary depending on patient's condition or the availability of water. If possible, continue skin and/or eye irrigation during emergency medical transport. Double-bag contaminated clothing and personal belongings of the patient.

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Depending on the situation, the rescuer should wear an appropriate mask, gloves, protective clothing and a respirator or self-contained breathing apparatus. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : Reacts violently with water. Will react with water or steam to produce heat and corrosive fumes.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
phosphorus oxides
sulfur oxides

Special protective actions for fire-fighters : 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.

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.

Remark : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : 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.
- For emergency responders** : Put on appropriate personal protective equipment (see Section 8). If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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 and materials for containment and cleaning up

- Small spill** : Put on appropriate personal protective equipment (see Section 8). Stop leak if without risk. Move containers from spill area. Neutralize acids by applying basic substances (soda ash or lime) or use an acid spill kit. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : Put on appropriate personal protective equipment (see Section 8). Approach release from upwind. Stop leak if without risk. Prevent entry into sewers, water courses, basements or confined areas. Move containers from spill area. 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. Place spilled material in an appropriate container for disposal. 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.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Handle the material in a fume hood/cupboard or under local exhaust ventilation. 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. Refer to NFPA 400 Hazardous Materials Code for further information on the safe storage and handling of hazardous materials.

- Advice on general occupational hygiene** : 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. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a corrosion resistant container with a resistant inner liner. Store locked up. Separate from alkalis. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable concentrations of vapor may accumulate in the headspace of containers. 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. Refer to NFPA 400 Hazardous Materials Code for further information on the safe storage and handling of hazardous materials.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Orthophosphoric acid - Canadian Regulations	<p>CA Alberta Provincial (Canada, 4/2009). Skin sensitizer. 15 min OEL: 3 mg/m³ 15 minutes. 8 hrs OEL: 1 mg/m³ 8 hours.</p> <p>CA British Columbia Provincial (Canada, 4/2014). TWA: 1 mg/m³ 8 hours. STEL: 3 mg/m³ 15 minutes.</p> <p>CA Ontario Provincial (Canada, 1/2013). TWA: 1 mg/m³ 8 hours. STEL: 3 mg/m³ 15 minutes.</p> <p>CA Quebec Provincial (Canada, 1/2014). TWAEV: 1 mg/m³ 8 hours. STEV: 3 mg/m³ 15 minutes.</p>

Section 8. Exposure controls/personal protection

Sulfuric acid - Canadian Regulations	<p>CA Alberta Provincial (Canada, 4/2009). 15 min OEL: 3 mg/m³ 15 minutes. 8 hrs OEL: 1 mg/m³ 8 hours.</p> <p>CA Ontario Provincial (Canada, 1/2013). TWA: 0.2 mg/m³ 8 hours.</p> <p>CA Quebec Provincial (Canada, 1/2014). TWA_{EV}: 1 mg/m³ 8 hours. STEV: 3 mg/m³ 15 minutes.</p> <p>CA British Columbia Provincial (Canada, 4/2014). TWA: 0.2 mg/m³ 8 hours. Form: thoracic</p>
Orthophosphoric acid - U.S. Federal Regulations	<p>ACGIH TLV (United States, 4/2014). TWA: 1 mg/m³ 8 hours. STEL: 3 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1 mg/m³ 8 hours. STEL: 3 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 1 mg/m³ 10 hours. STEL: 3 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1 mg/m³ 8 hours.</p>
Sulfuric acid - U.S. Federal Regulations	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 1 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 1 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 4/2014). TWA: 0.2 mg/m³ 8 hours. Form: Thoracic fraction</p> <p>OSHA PEL (United States, 2/2013). TWA: 1 mg/m³ 8 hours.</p>
Water - U.S. Federal Regulations	Not established

Appropriate engineering controls : 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.

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.

Individual protection measures

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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended:
butyl rubber
neoprene rubber
nitrile rubber

Section 8. Exposure controls/personal protection

- PVC
Contact your personal protective equipment supplier to verify the compatibility of the equipment for the intended purpose.
- Body protection** : 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. Recommended:
chemical-resistant protective suit
Contact your personal protective equipment supplier to verify the compatibility of the equipment for the intended purpose.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Impervious rubber safety boots.
Contact your personal protective equipment supplier to verify the compatibility of the equipment for the intended purpose.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Contact your personal protective equipment supplier to verify the compatibility of the equipment for the intended purpose.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Green.
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : <1
- Melting point** : Not available.
- Boiling point** : 261°C (501.8°F)
- Flash point** : [Product does not sustain combustion.]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Non-flammable substance. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminum, tin, lead and zinc. Flammable concentrations of vapor may accumulate in the headspace of containers.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 2.0
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : 300 CP

Section 10. Stability and reactivity

- Reactivity** : Reactive or incompatible with the following materials:
 Reacts violently with bases.
 May be corrosive to metals.
 Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.
 This product should be stored away from oxidizing materials and strong bases.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : May be corrosive to metals. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.
- Conditions to avoid** : No specific data. This product should be stored away from oxidizing materials and strong bases. Refer to NFPA 400 Hazardous Materials Code for further information on the safe storage and handling of hazardous 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
 metals
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Phosphoric acid	LD50 Oral	Rat	1250 mg/kg	-
Water	LD50 Oral	Rat	>90 g/kg	-
Sulfuric acid	LD50 Oral	Rat	2140 mg/kg	-

Conclusion/Summary : Corrosive to the digestive tract.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Sulfuric acid	Eyes - Severe irritant	Rabbit	-	250 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 5 milligrams	-

Conclusion/Summary

- Skin** : Corrosive to the skin.
- Eyes** : Corrosive to eyes.
- Respiratory** : May cause respiratory irritation.

Sensitization

Not available.

Conclusion/Summary

- Skin** : No known significant effects or critical hazards.
- Respiratory** : No known significant effects or critical hazards.

Mutagenicity

Not available.

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

Section 11. Toxicological information

Carcinogenicity

Not available.

Conclusion/Summary : The International Agency for Research Cancer has concluded that occupational exposure to strong inorganic acid mists are carcinogenic to humans. The U.S. National Toxicology Program has concluded that occupational exposure to strong inorganic acid mists containing sulfuric acid are carcinogenic.

Reproductive toxicity

Not available.

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

Teratogenicity

Not available.

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

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Inhalation
Skin contact
Eye contact

Potential acute health effects

Eye contact : Corrosive to eyes on contact. Causes serious eye damage.
Inhalation : Irritating to the respiratory system. May cause breathing difficulties.
Skin contact : Corrosive to the skin. Causes severe burns.
Ingestion : Corrosive to the digestive tract. May cause burns to the mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
coughing
wheezing and breathing difficulties

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
throat and stomach pain
difficulty swallowing
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Corrosive to the eyes, skin and respiratory system.

Section 11. Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : May cause cancer if inhaled.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer if inhaled. The U.S. National Toxicology Program has concluded that occupational exposure to strong inorganic acid mists containing sulfuric acid are carcinogenic.

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.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Orthophosphoric acid	Acute EC50 105 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 60 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
Sulfuric acid	Acute LC50 87 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 42500 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Gambusia affinis - Adult	96 hours

Conclusion/Summary : Harmful to aquatic life.

Persistence and degradability

Conclusion/Summary : Not persistent. Readily biodegradable

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Water	-1.38	-	low

Mobility in soil




Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

Disposal methods : 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. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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.

Section 14. Transport information

	TDG Classification	DOT Classification	Mexico Classification	IMDG	IATA
UN number	1805	1805	1805	Not available.	Not available.
UN proper shipping name	Phosphoric acid, liquid	Phosphoric acid solution	Phosphoric acid solution	Not available.	Not available.
Transport hazard class(es)	8 	8 	8 	Not available.	Not available.
Packing group	III	III	III	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	<p><u>Explosive Limit and Limited Quantity Index</u> 5</p> <p><u>Passenger Carrying Road or Rail Index</u> 5</p>	<p><u>Reportable quantity</u> 5000 lbs / 2270 kg [299.84 gal / 1135 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p><u>Packaging instruction</u> Passenger aircraft Quantity limitation: 1 L</p> <p>Cargo aircraft Quantity limitation: 30 L</p> <p><u>Special provisions</u> A7,IB3,IP3,N34, T4,TP1</p>	-	-	-

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.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: Phosphorus (total)

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : All components are listed or exempted.

Malaysia : All components are listed or exempted.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Turkey : Not determined.

U.S. Federal Regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
TSCA 8(b) inventory:: All components are listed or exempted.
Clean Water Act (CWA) 311: Phosphoric acid

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304 Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sulfuric acid	2 - 3	Yes.	1000	-	1000	-

SARA 304 RQ : 40000 lbs / 18160 kg

Section 15. Regulatory information

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard.
Phosphoric acid	94 - 95	No.	No.	No.	Yes.	No.
Sulfuric acid	2 - 3	No.	No.	No.	Yes.	Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Sulfuric acid	7664-93-9	2 - 3
Supplier notification	Sulfuric acid	7664-93-9	2 - 3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: Phosphoric acid
New York : The following components are listed: Phosphoric acid
New Jersey : The following components are listed: Phosphoric acid
Pennsylvania : The following components are listed: Phosphoric acid
California Prop. 65 : **WARNING:** CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Strong inorganic acid mists containing sulfuric acid	Yes.	No.	No.	No.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	* 3
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA).

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



Section 16. Other information

Copyright ©2013, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing : 12/19/2016
Date of issue/Date of revision : 12/19/2016
Date of previous issue : 1/19/2016
Version : 2.1

Indicates information that has changed from previously issued version.

This Safety Data Sheet has been revised to comply with Hazcom 2012 and WHMIS 2015 requirements.

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Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations
 HPR = Hazardous Products Regulations

Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> CORROSIVE TO METALS - Category 1 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 CARCINOGENICITY (inhalation) - Category 1A	Expert judgment Expert judgment Weight of evidence Regulatory data

References

: Transportation of Dangerous Goods Act and Clear Language Regulations, current edition at time of (M)SDS preparation, Transport Canada;
 Hazardous Products Act and Regulations, current revision at time of (M)SDS preparation, Health Canada;
 Domestic Substances List, current revision at time of (M)SDS preparation, Environment Canada;
 29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
 40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
 49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
 Threshold Limit Values for Chemical Substances, current edition at time of SDS preparation, American Conference of Governmental Industrial Hygienists;
 NFPA 400, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
 NFPA 704, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
 Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers;
 ERG 2012, Emergency Response Guidebook, U.S. Department of Transport, Transport Canada, and the Secretariat of Transportation and Communications of Mexico
 Hazardous Substances Data Bank, current revision at time of SDS preparation, National Library of Medicine, Bethesda, Maryland
 Integrated Risk Information System, current revision at time of SDS preparation, U.S. Environmental Protection Agency, Washington, D.C.

Section 16. Other information

Pocket Guide to Chemical Hazards, current revision at time of SDS preparation, National Institute for Occupational Safety and Health, Cincinnati, Ohio ;
Agency for Toxic Substances and Disease Registry Databank, current revision at time of SDS preparation, U.S. Department of Health and Human Services, Atlanta, Georgia
National Toxicology Program, Report on Carcinogens, Division of the National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio
The Fertilizer Institute, Product Toxicology Testing Program Results, TFI, Washington , D.C., 2003

Notice to reader

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