



Safety Data Sheet Revision date 04/30/2015

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form	: Mixture
Product name	: Phosphoric Acid (Green MGA and Industrial)
Product code	: GRMGA, PAPMGA, PHOS54, PHOS60
Formula	: H <sub>3</sub> PO <sub>4</sub> (Phosphoric acid)
Synonyms	: GREEN30

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

Use of the substance/mixture

: Industrial use Agricultural chemical

### **1.3.** Details of the supplier of the safety data sheet

PCS Sales (USA), Inc. 1101 Skokie Blvd. Suite 400 Northbrook, IL 60062 T 800-241-6908 / 847-849-4200

Suite 500 122 1st Avenue South Saskatoon, Saskatchewan Canada S7K7G3 T 800-667-0403 (Canada) / 800-667-3930 (USA)

### SDS@PotashCorp.com - www.PotashCorp.com

### 1.4. Emergency telephone number

Emergency number : 800-424-9300 CHEMTREC

### **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

#### **GHS-US classification**

Acute Tox. 4 (Oral)H302Skin Corr. 1AH314Eye Dam. 1H318Carc. 1AH350STOT SE 3H335Aquatic Acute 2H401

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#### 2.2. Label elements

### **GHS-US** labelling

GHS-US labelling	
Hazard pictograms (GHS-US)	: GHS05 GHS07 GHS08
Signal word (GHS-US)	: Danger
Hazard statements (GHS-US)	<ul> <li>H302 - Harmful if swallowed</li> <li>H314 - Causes severe skin burns and eye damage</li> <li>H318 - Causes serious eye damage</li> <li>H335 - May cause respiratory irritation</li> <li>H350 - May cause cancer</li> <li>H401 – Toxic to aquatic life</li> </ul>
Precautionary statements (GHS-US)	<ul> <li>P201 - Obtain special instructions before use</li> <li>P202 - Do not handle until all safety precautions have been read and understood</li> <li>P260 - Do not breathe fume, mist, vapours, spray</li> <li>P264 - Wash hands and forearms thoroughly after handling</li> <li>P270 - Do not eat, drink or smoke when using this product</li> <li>P271 - Use only outdoors or in a well-ventilated area</li> <li>P273 - Avoid release to the environment</li> <li>P280 - Wear eye protection, face protection, protective gloves, protective clothing</li> <li>P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting</li> <li>P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower</li> <li>P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing</li> <li>P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing</li> <li>P308+P313 - IF exposed or concerned: Get medical advice/attention</li> <li>P310 - Immediately call a POISON CENTER or doctor</li> <li>P363 - Wash contaminated clothing before reuse</li> <li>P403+P233 - Store in a well-ventilated place. Keep container tightly closed</li> <li>P405 - Store locked up</li> <li>P501 - Dispose of contents/container according to local, regional, national, and international regulations</li> </ul>

#### 2.3. **Other hazards**

Hazardous to the aquatic environment No additional information available

# **SECTION 3: Composition/information on ingredients**

#### 3.1. **Substances**

Not applicable

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### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Phosphoric acid	(CAS No.) 7664-38-2	72 - 85	Acute Tox. 4 (Oral), H302
			Skin Corr. 1A, H314
			Eye Dam. 1, H318
			STOT SE 3, H335
			Aquatic Acute 2, H401
Sulfuric acid	(CAS No.) 7664-93-9	0.3 - 4	Acute Tox. 2
			(Inhalation:dust,mist), H330
			Skin Corr. 1A, H314
			Eye Dam. 1, H318
			Carc. 1A, H350
Fluorides, as F		0.3 - 0.7	Not classified

Note: GRMGA Typical Nutrient Strength is 54% (as  $P_2O_5$ ) Note: PAPMGA Typical Nutrient Strength is 56% (as  $P_2O_5$ ) Note: PHOS54 Typical Nutrient Strength is 58% (as  $P_2O_5$ ) Note: PHOS60 Typical Nutrient Strength is 60% (as  $P_2O_5$ )

### **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

First-aid measures general	: If exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Using proper respiratory protection, immediately move the exposed person to fresh air. Keep at rest and in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Seek immediate medical advice. Symptoms may be delayed.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse immediately with plenty of water (for at least 15 minutes). Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists.
First-aid measures after ingestion	: If swallowed, do not induce vomiting. Seek medical advice immediately and show this container or label.
4.2. Most important symptoms a	and effects, both acute and delayed
Symptoms/injuries	: Corrosive. Causes burns. Harmful if swallowed.
Symptoms/injuries after inhalation	: Causes severe respiratory irritation if inhaled. Symptoms may include: Burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.
Symptoms/injuries after skin contact	: Contact may cause immediate severe irritation progressing quickly to chemical burns.

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Symptoms/injuries after eye contact	: Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.
Symptoms/injuries after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage and effects such as erosion of teeth, lesions on the skin, tracheo-bronchitis, mouth inflammation, conjunctivitis, and gastritis. Repeated or prolonged inhalation of mist may cause cancer.

#### Indication of any immediate medical attention and special treatment needed 4.3.

No additional information available

<b>SECTION 5: Firefighting meas</b>	ures
5.1. Extinguishing media	
Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: Do not get water inside containers. Do not apply water stream directly at source of leak. Do not use a heavy water stream. A direct water stream will cause violent splattering and generation of heat.
5.2. Special hazards arising from	n the substance or mixture
Fire hazard	: Not flammable. Under conditions of fire this material may produce: Oxides of phosphorus; Phosphine; Sulphur oxides.
Explosion hazard	: Product is not explosive.
5.3. Advice for firefighters	
Firefighting instructions	: Keep upwind. Use water spray or fog for cooling exposed containers. If water is added to concentrated acid, violent splattering can occur, and considerable heat may be generated. Cool non-leaking, fire-exposed containers with water spray.
Protection during firefighting	<ul> <li>Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products.</li> </ul>
Other information	: Do not allow run-off from fire fighting to enter drains or water courses.

# SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

### 6.1.1. For non-emergency personnel

Protective equipment	: Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.
Emergency procedures	: Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area. Keep upwind.

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### 6.1.2. For emergency responders

Protective equipment	: Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.
Emergency procedures	: Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area.

### 6.2. Environmental precautions

If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of accident or road spill notify CHEMTREC at 800-424-9300. In other countries call CHEMTREC at (International code) +1-703-527-3887.

### 6.3. Methods and material for containment and cleaning up

For containment	: Contain any spills with dikes or inert absorbents to prevent migration and entry into sewers or streams. Do not allow into drains or water courses or dispose of where ground or surface waters may be affected.
Methods for cleaning up	: Ventilate area. Small quantities of liquid spill: take up in non-combustible inert absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labelled container to be disposed at an appropriate disposal facility according to current applicable laws and regulations and product characteristics at the time of disposal.
	Liquid spill: neutralize with powdered limestone or sodium bicarbonate.
	Practice good housekeeping – spillage can be slippery on smooth surface either wet or dry.

### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Avoid all eye and skin contact and do not breathe vapour and mist. Wear recommended personal protective equipment. Ensure there is adequate ventilation. Keep away from heat and sources of ignition. Employ good maintenance practices to prevent leaks. Use good process control measures to prevent releases. Do not add water to acid. When diluting, always add acid to water. Causes severe burns.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety procedures. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash contaminated clothing before reuse.
7.2. Conditions for safe storage,	including any incompatibilities
Storage conditions	: Store in dry, cool area. Store in a well-ventilated place. Keep away from combustible materials. Diking of storage tanks is recommended.

Incompatible materials	: Avoid contact with combustibles and reactive materials.
Prohibitions on mixed storage	: Keep away from (strong) bases.
Storage area	: Store in dry, cool area. Store in a well-ventilated place. Keep away from
	combustible materials.

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### 7.3. Specific end use(s)

Industrial use. Agricultural chemical.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Sulfuric acid (7664-93-9)		
USA ACGIH	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
USA NIOSH	IDLH	15 mg/m³
USA NIOSH	TWA	1 mg/m <sup>3</sup>
USA OSHA	TWA	1 mg/m <sup>3</sup>
Alberta	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
British Columbia	TWA	0.2 mg/m <sup>3</sup> (thoracic, contained in strong inorganic acid mists)
Manitoba	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
New Brunswick	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Newfoundland & Labrador	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
Northwest Territories	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Nova Scotia	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
Nunavut	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Ontario	TWA	0.2 mg/m <sup>3</sup> (thoracic)
Prince Edward Island	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
Quebec	TWAEV / STEV	1 mg/m <sup>3</sup> (TWAEV), 3 mg/m <sup>3</sup> (STEV)
Saskatchewan	TWA / STEL	0.2 mg/m <sup>3</sup> (TWA, thoracic fraction), 0.6 mg/m <sup>3</sup> (STEL, thoracic fraction)
Yukon	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 1 mg/m <sup>3</sup> (STEL)
Phosphoric acid (7664-38-2)		
USA ACGIH	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
USA NIOSH	IDLH	1000 mg/m <sup>3</sup>
USA NIOSH	TWA	1 mg/m <sup>3</sup>
USA OSHA	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Alberta	TWA / STEL	1 mg/m³ (TWA), 3 mg/m³ (STEL)
British Columbia	TWA / STEL	1 mg/m³ (TWA), 3 mg/m³ (STEL)
Manitoba	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)

New Brunswick

Newfoundland & Labrador

TWA / STEL

TWA / STEL

1 mg/m<sup>3</sup> (TWA), 3 mg/m<sup>3</sup> (STEL)

1 mg/m<sup>3</sup> (TWA), 3 mg/m<sup>3</sup> (STEL)

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Phosphoric acid (7664-38-2)		
Northwest Territories	TWA / STEL	1 mg/m³ (TWA), 3 mg/m³ (STEL)
Nova Scotia	TWA / STEL	1 mg/m³ (TWA), 3 mg/m³ (STEL)
Nunavut	TWA / STEL	1 mg/m³ (TWA), 3 mg/m³ (STEL)
Ontario	TWA / STEL	1 mg/m³ (TWA), 3 mg/m³ (STEL)
Prince Edward Island	TWA / STEL	1 mg/m³ (TWA), 3 mg/m³ (STEL)
Quebec	TWAEV / STEV	1 mg/m³ (TWAEV), 3 mg/m³ (STEV)
Saskatchewan	TWA / STEL	1 mg/m³ (TWA), 3 mg/m³ (STEL)
Yukon	TWA / STEL	1 mg/m³ (TWA), 1 mg/m³ (STEL)

### 8.2. Exposure controls

Appropriate engineering controls	: Provide sufficient ventilation to keep vapors below the permissible exposure limit. Ensure adequate ventilation, especially in confined areas. Packaging and unloading areas and open processing equipment may require mechanical exhaust systems. Corrosion-proof construction recommended.
Personal protective equipment	: Protective goggles. Face shield. Gas mask at concentration in the air > > TLV. Protective clothing.
Hand protection	<ul> <li>Impermeable protective gloves, such as: nitrile, neoprene, or PVC. Wear gauntlet gloves. Check glove manufacturer's permeation / degradation information.</li> </ul>
Eye protection	: Chemical safety goggles and full face shield. Do not wear contact lenses. For increased protection, use supplied-air acid hood.
Skin and body protection	: Wear suitable protective clothing. Wear acid-resistant suit with acid- resistant apron, boots.
Respiratory protection	: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits. Use respirator approved for acid fumes and mist.
Environmental exposure controls	: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

# SECTION 9: Physical and chemical properties

9.1. Information on ba	9.1. Information on basic physical and chemical properties		
Physical state	: Liquid		
Appearance	: Viscous		
Colour	: Green		
Odour	: Acrid		
Odour threshold	: No data available		
рН	: 1-1.5		

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pH solution	: 1 – 10 g/l	
Molecular mass	: 98 g/mol (Phosphoric acid)	
Relative evaporation rate	: No data available	
(butylacetate=1)		
Melting point	: No data available	
Freezing point	: < -6.7 °C (< 20 °F) (56% P <sub>2</sub> O <sub>5</sub> )	
Boiling point	: 131 - 193 °C (268 - 380 °F)	
Flash point	: No data available	
Self ignition temperature	: No data available	
Decomposition temperature	: No data available	
Flammability (solid, gas)	: No data available	
Vapour pressure	: 1 - 6 mm Hg at 25 °C (77 °F)	
Relative vapour density at 20 °C	: No data available	
Relative density	: 1.7 at 24 °C (75 °F)	
Bulk Density	: 14 lb/gal	
Solubility	: Water: Miscible	
Log Pow	: No data available	
Log Kow	: No data available	
Viscosity	: 67-140 cP at 24 °C (75 °F) (53-62% P <sub>2</sub> O <sub>5</sub> )	
	40-95 cP at 38 °C (100 °F) (53-62% P <sub>2</sub> O <sub>5</sub> )	
Explosive properties	: No data available	
Oxidising properties	: No data available	
Explosive limits	: No data available	
9.2 Other information		

### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

### 10.1. Reactivity

Product is hygroscopic. Acidic liquids, such as this material, may react with metals and release hydrogen gas.

### 10.2. Chemical stability

Stable at standard temperature and pressure.

### **10.3.** Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Protect from moisture. Avoid high temperatures.

### 10.5. Incompatible materials

Avoid contact with bases, aluminum, copper, mild steel, brass, and bronze.

### **10.6.** Hazardous decomposition products

Under conditions of fire this material may produce: Oxides of phosphorus; Phosphine; Sulphur oxides.

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SECTION 11: Toxicological information			
11.1. Information on toxicological effects			
Acute toxicity	: Harmful if swallowed.		
Sulfuric acid (7664-93-9)	Sulfuric acid (7664-93-9)		
LD50 oral rat	2140 mg/kg		
LC50 inhalation rat (mg/l)	0.36 mg/l 4 h (reported as 510 mg/m3/2 h)		
LC50 inhalation rat (ppm)	86.75 ppm 4 h (reported as 347 ppm/1 h)		
Phosphoric acid (7664-38-2)			
LD50 oral rat	1530 mg/kg		
LD50 dermal rabbit	2730 mg/kg		
LC50 inhalation rat (mg/l)	> 850 mg/m <sup>3</sup> (Exposure time: 1 h)		
Skin corrosion/irritation	<ul> <li>Causes severe skin burns and eye damage.</li> <li>pH: 1 – 1.5</li> </ul>		
Serious eye damage/irritation	: Causes serious eye damage.		
	pH: 1 – 1.5		
Respiratory or skin sensitisation	: Not classified		
Germ cell mutagenicity	: Not classified		
Carcinogenicity	: May cause cancer <sup>1</sup> .		
Sulfuric acid (7664-93-9)			
IARC group	1		
Reproductive toxicity	: Not classified		
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.		
Specific target organ toxicity (repeated exposure)	: Not classified		
Aspiration hazard	: Not classified		
SECTION 12: Ecological inform	nation		

### 12.1. Toxicity

	EPA Ecological Toxicity rating :	High
Ecotoxicity	Acute Toxicity to Fish:	( <i>L. macrochirus</i> (bluegill sunfish)) 96-hr static: $LC_{50} = pH 3.0-3.5$ .
	Chronic Toxicity to Fish:	Mosquito fish: LD50 = 138 mg/L; 96 hours (CAS#7664-38-2)
	Acute Toxicity to Aquatic Invertebrates:	( <i>Daphnia magna</i> ) 12-hr static: $EC_{50} = pH 4.6$ ; ( <i>Daphnia pulex</i> ) 12-hr static: $EC_{50} = pH 4.1$ ; ( <i>Gammarus pulex</i> ) 12-hr static: $LC_{50} = pH 3.4$
	Chronic Toxicity to Aquatic Invertebrates:	No data available
	Acute Toxicity to Aquatic Plants:	Dangerous to aquatic plants at high concentrations.
	Toxicity to Bacteria:	(Activated sludge): $EC_{50} = pH 2.55$ .

<sup>&</sup>lt;sup>1</sup> "The International Agency for Research on Cancer (IARC) classified "strong inorganic acid mists containing sulfuric acid" as a Category 1 carcinogen, a substance that is "carcinogenic to humans". The National Toxicity Program classified "strong inorganic acid mists containing sulfuric acid" as a "known human carcinogen". These classifications are for strong inorganic acid mists only and do not apply to sulfuric acid or sulfuric acid solutions. The basis for the classifications rest on several epidemiology studies which have several deficiencies. These studies did not account for exposure to other substances, some known to be animal or potential human carcinogens, social influences (smoking, etc.) and included small numbers of subjects. Based on the overall weight of evidence from all human and chronic animal studies, no definitive causal relationship between sulfuric acid mist exposure and respiratory tract tumors has been shown. When handling this material avoid the creation of mist.

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Toxicity to Soil Dwelling Organisms:		No data available
	Toxicity to Terrestrial Plants:	(Peas, beans, beets, rapeseed and weeds) Sprayed with 15-20% solution of H <sub>3</sub> PO <sub>4</sub> : Foliage was destroyed on all plants.
Environmental Fate:	Stability in Water:	Ionic dissociation in water.
Environmentar rate.	Stability in Soil:	Dissolves some soil material (carbonates).
	Transport and Distribution:	Under acidic soil conditions, sparsely soluble phosphates tend to solubilize.
Toxicity:	Inorganic phosphates have the potential to increase the growth of freshwater algae, whose eventual death will reduce the available oxygen for aquatic life.	
Degradation	Biodegradation:	Under anaerobic conditions, microorganisms may degrade the product to phosphine.
Products:	Photodegradation:	No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations	: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.
Waste disposal recommendations	: Place in an appropriate container and dispose of the contaminated material at a licensed site.
Additional information	: Dispose of waste material in accordance with all local, regional, national, and international regulations.

## **SECTION 14: Transport information**

In accordance with DOT / TDG / ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No.(DOT) DOT NA no.	: 1805 UN1805
14.2. UN proper shipping name	
DOT Proper Shipping Name	: Phosphoric Acid Solution
Department of Transportation (DOT) Hazard Classes	: 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT)	: 8 - Corrosive substances
	8
Packing group (DOT)	: III - Minor Danger

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DOT Special Provisions (49 CFR 172.102)	: <b>A7</b> - Steel packagings must be corrosion-resistant or have protection against corrosion		
	<ul> <li>IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).</li> <li>N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.</li> </ul>		
	<b>T4</b> –See Table (172.102(7)) <b>TP1-</b> TP1 The maximum degree of filling must not exceed the degree of filling determined by the following:		
	$\left(\text{Degree of filling} = \frac{97}{1 + \alpha \left(t_{\gamma} - t_{f}\right)}\right).$		
	Where: t <sub>r</sub> is the maximum mean bulk temperature during transport, and t <sub>f</sub> is the temperature in degrees celsius of the liquid during filling (For additional clarification, see 49 CFR 172.102(8)).		
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154		
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203		
DOT Packaging Bulk (49 CFR 173.xxx)	: 241		
<b>14.3.</b> Additional information Emergency Response Guide (ERG) Number	: 154		
Reportable Quantity	: 5000 pounds (at 100% Phosphoric Acid)		
Other information	: No supplementary information available.		
Overland transport			
No additional information available			
Transport by sea			
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.		
Air transport			
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L		

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DOT Quantity Limitations Car aircraft only (49 CFR 175.75)	•	
IATA ERG Number	: 8L	
CECTION 15. Desulate		

### SECTION 15: Regulatory information

### 15.1. US Federal regulations

Phosphoric Acid (Green MGA and Industrial)			
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard		
	Delayed (chronic) health hazard		
Sulfuric acid (7664-93-9)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
Listed on SARA Section 302 (Specific toxic chemical listings)			
Listed on SARA Section 313 (Specific toxic chemical listings)			
SARA Section 302 Threshold Planning Quantity (TPQ) 1000 lb			
SARA Section 313 - Emission Reporting		1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)	
Phosphoric acid (7664-38-2)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			

### **15.2. US State regulations**

The following states have an OSH program approved by OSHA. If you are located in any of these states you may be under state jurisdiction rather than federal jurisdiction and your state may have more stringent requirements than OSHA. You should consult your state regulations to ensure compliance.

Alaska	Indiana	Minnesota	North Carolina	Utah
Arizona	Iowa	Nevada	Oregon	Vermont
California	Kentucky	New Mexico	Puerto Rico	*Virgin Islands
*Connecticut	Maryland	*New Jersey	South Carolina	Virginia
Hawaii *Illinois	Michigan	*New York	Tennessee	Washington Wyoming

\*The state plans in these states apply only to public sector employers. In these states private sector employers are subject to USOL – OSHA jurisdiction. All other state plans apply to both public and private sector employers.

Sulfuric acid (7664-93-9)
U.S California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute
U.S California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic
U.S California - Toxic Air Contaminant List (AB 1807, AB 2728)
U.S Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S Hawaii - Occupational Exposure Limits - STELs
U.S Hawaii - Occupational Exposure Limits - TWAs
U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S Idaho - Occupational Exposure Limits - TWAs
U.S Illinois - Toxic Air Contaminant Carcinogens

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U.S Illinois - Toxic Air Contaminants
U.S Louisiana - Reportable Quantity List for Pollutants
U.S Maine - Air Pollutants - Hazardous Air Pollutants
U.S Massachusetts - Allowable Ambient Limits (AALs)
U.S Massachusetts - Allowable Threshold Concentrations (ATCs)
U.S Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc Reporting Category 1
U.S Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc Reporting Category 2
U.S Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S Massachusetts - Right To Know List
U.S Massachusetts - Threshold Effects Exposure Limits (TELs)
U.S Massachusetts - Toxics Use Reduction Act
U.S Michigan - Occupational Exposure Limits - TWAs
U.S Michigan - Polluting Materials List
U.S Minnesota - Chemicals of High Concern
U.S Minnesota - Hazardous Substance List
U.S Minnesota - Permissible Exposure Limits - TWAs
U.S New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S New Jersey - Discharge Prevention - List of Hazardous Substances
U.S New Jersey - Environmental Hazardous Substances List
U.S New Jersey - Right to Know Hazardous Substance List
U.S New Jersey - Special Health Hazards Substances List
U.S New York - Occupational Exposure Limits - TWAs
U.S New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S North Carolina - Control of Toxic Air Pollutants
U.S North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S Ohio - Extremely Hazardous Substances - Threshold Quantities
U.S Oregon - Permissible Exposure Limits - TWAs
U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S Pennsylvania - RTK (Right to Know) List
U.S Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour
U.S Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual
U.S South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations
U.S South Carolina - Toxic Air Pollutants - Pollutant Categories
U.S Tennessee - Occupational Exposure Limits - TWAs
U.S Texas - Effects Screening Levels - Long Term
U.S Texas - Effects Screening Levels - Short Term
U.S Vermont - Permissible Exposure Limits - TWAs
U.S Washington - Permissible Exposure Limits - STELs
U.S Washington - Permissible Exposure Limits - TWAs
U.S Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40
Feet
U.S Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75
Feet
U.S Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater
U.S Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

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Phosphoric aci	· · ·
	a - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic
	a - Toxic Air Contaminant List (AB 1807, AB 2728)
U.S Connecti	cut - Hazardous Air Pollutants - HLVs (30 min)
U.S Connecti	cut - Hazardous Air Pollutants - HLVs (8 hr)
U.S Delaware	e - Pollutant Discharge Requirements - Reportable Quantities
U.S Hawaii - (	Occupational Exposure Limits - STELs
U.S Hawaii - (	Occupational Exposure Limits - TWAs
U.S Idaho - N	on-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
	on-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S Idaho - O	ccupational Exposure Limits - TWAs
U.S Louisiana	- Reportable Quantity List for Pollutants
U.S Massachi	usetts - Allowable Ambient Limits (AALs)
U.S Massachi	usetts - Allowable Threshold Concentrations (ATCs)
U.S Massachi	usetts - Oil & Hazardous Material List - Groundwater Reportable Conc Reporting Category 1
U.S Massachi	usetts - Oil & Hazardous Material List - Groundwater Reportable Conc Reporting Category 2
U.S Massachi	usetts - Oil & Hazardous Material List - Reportable Quantity
U.S Massachi	usetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S Massachi	usetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S Massachi	usetts - Right To Know List
U.S Massachi	usetts - Threshold Effects Exposure Limits (TELs)
U.S Massachi	usetts - Toxics Use Reduction Act
U.S Michigan	- Occupational Exposure Limits - STELs
U.S Michigan	- Occupational Exposure Limits - TWAs
U.S Michigan	- Polluting Materials List
U.S Minnesot	a - Chemicals of High Concern
U.S Minnesot	a - Hazardous Substance List
U.S Minnesot	a - Permissible Exposure Limits - STELs
U.S Minnesot	a - Permissible Exposure Limits - TWAs
U.S New Ham	npshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S New Ham	npshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S New Jers	ey - Discharge Prevention - List of Hazardous Substances
U.S New Jers	ey - Right to Know Hazardous Substance List
U.S New Jers	ey - Special Health Hazards Substances List
U.S New York	c - Occupational Exposure Limits - TWAs
	x - Reporting of Releases Part 597 - List of Hazardous Substances
	kota - Air Pollutants - Guideline Concentrations - 1-Hour
	kota - Air Pollutants - Guideline Concentrations - 8-Hour
•	Permissible Exposure Limits - TWAs
	ania - RTK (Right to Know) - Environmental Hazard List
	ania - RTK (Right to Know) List
	and - Air Toxics - Acceptable Ambient Levels - Annual
	rolina - Toxic Air Pollutants - Maximum Allowable Concentrations
	rolina - Toxic Air Pollutants - Pollutant Categories
	e - Occupational Exposure Limits - STELs
	e - Occupational Exposure Limits - TWAs
	fects Screening Levels - Long Term
U.S Texas - Ef	fects Screening Levels - Short Term

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- U.S. Vermont Permissible Exposure Limits STELs
- U.S. Vermont Permissible Exposure Limits TWAs

U.S. - Washington - Permissible Exposure Limits - STELs

U.S. - Washington - Permissible Exposure Limits - TWAs

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

### 15.3. Canadian regulations

Phosphoric Acid (Green MGA and Industrial)	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
	Class E - Corrosive Material
Sulfuric acid (7664-93-9)	
Listed on the Canadian DSL (Domestic Sustances List) inventory.	

Listed on the Canadian Ingredient Disclosure List – Disclosure at 1%WHMIS ClassificationClass D Division 1 Subdivision A - Very toxic material causing immediate and<br/>serious toxic effects

	Class E - Corrosive Material
Phosphoric acid (7664-38-2)	
Listed on the Canadian DSL (Domestic Sustances List) inventory.	
Listed on the Canadian Ingredient Disclosure List – Disclosure at 1%	
WHMIS Classification	Class E - Corrosive Material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

SECTION 16: Other information			
NFPA health hazard	<ul> <li>3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.</li> </ul>		
NFPA fire hazard	: 0 - Materials that will not burn.		
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.		

Full text of H-phrases:

Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2	
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4	
Carc. 1A	Carcinogenicity Category 1A	
Eye Dam. 1	Serious eye damage/eye irritation Category 1	
Skin Corr. 1A	skin corrosion/irritation Category 1A	
STOT SE 3	Specific target organ toxicity (single exposure) Category 3	
H302	Harmful if swallowed	

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H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H335	May cause respiratory irritation
H350	May cause cancer

### Previous PotashCorp MSDS Number : MSDS 47 – Phosphoric Acid (Green MGA and Industral)

SDS US (GHS HazCom 2012)

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