1. IDENTIFICATION OF THE SUBSTANCE OR PREPARATION AND OF THE COMPANY

Identification of Preparation:	H306 Lime and Scale
Date of Safety Data Sheet:	October 22, 2016
Use of Preparation:	Cleaner
Company Identification:	Hawco Products Ltd. 61 Shaver Street Brantford, Ontario,N3T 5V6

Company Emergency Telephone Number Emergency Phone: 519-759-2443

remover.

2. HAZARD IDENTIFICATION

Emergency Overview: OSHA / WHMIS 2015 Hazards Corrosive Classification of substance or mixture GHS-US/Canadian classification: GHS Hazards Skin Corrosive 1B H314 Eye Damage 1 H318 Label Elements GHS-US/ Canada Labeling Hazard Pictograms (GHS):



Signal Word (GHS): Danger! Hazard Statements (GHS): H314 - Causes severe skin burns and eye damage H318 – Causes serious eye damage **Precautionary Statements (GHS-US)**: P260: Do not breathe mist, spray, and vapours. P264: Wash exposed skin thoroughly after handling. P280: Wear face protection, protective clothing, protective gloves, and eye protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340: IF INHALED: Remove person to fresh air and keep 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. Get medical attention.

P310: Immediately call a POISON CENTRE or doctor/physician.

P363: Wash contaminated clothing before reuse.

P405: Store locked up.

P501: Dispose of contents / container in accordance with local regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Description: Chemical Blend

A EIDST AID MEASUDES

Ingredient	CAS#	% by Wt	Classification
ortho-Phosphoric Acid	7664-38-2	15-35	Skin Corrosion Category 1B – H314 Serious Eye Damage/Irritation Category 2A – H318

4. FIRST AID MEASURES	
Inhalation:	Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE or doctor/physician.
Eye Contact:	Remove contacts. Flush with water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Repeat if required. Immediately call a POISON CENTRE or doctor/physician.
Skin Contact:	Thoroughly wash exposed skin with water. Remove any contaminated clothing and wash before reuse. Cover wounds with sterile bandage. Consult doctor/medical service. If burned surface >10%, take victim to hospital.
Ingestion:	Wash out mouth with water. Drink plenty of water. Do not induce vomiting unless directed by medical personal. Never give anything to an unconscious person. Immediately call a POISON CENTRE or doctor/physician.
Notes to Physician:	Treatment based on judgment of attending physician. Gastric lavage is not recommended.
Most Important symptoms and effects, both acute and delayed:	Coughing. Dry/sore throat. Irritation of the respiratory tract and nasal mucous. Caustic burns/corrosion to the skin. Dry/red skin. Corrosion of the eye tissue. Nausea. Abdominal pain. Blood in vomit. Burns to gastric/intestinal mucous.

5. FIRE FIGHTING MEASURES	
Suitable extinguishing media:	Water spray for extinguishing agent. CO2, dry chemical, alcohol resistant foam, sand.
Unsuitable extinguishing media:	None known. Do not use a heavy stream of water
Special exposure hazards	Thermal decomposition releases corrosive vapours. Decomposes on exposure to temperature rise.
Special safety equipment: Fire and explosion Further information	Self-contained positive pressure breathing apparatus and protective clothing. Not flammable. Not an explosive hazard. Keep containers and surrounding cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapour or mist. For Non-Emergency Personnel: Protective Equipment: Use appropriate personal protection equipment (PPE). Emergency Procedures: Evacuate unnecessary personnel. For Emergency Personnel: Protective Equipment: Equip cleanup crew with proper protection. Emergency Procedures: Ventilate area. Environmental Precautions Prevent entry to sewers and public waters Methods and Material for Containment and Cleaning Up: For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Methods for Cleaning Up: Clear up spills immediately with absorbent and dispose of waste safely.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection.

7. HANDLING AND STORAGE

Precautions for safe handling:

Ensure good ventilation/exhaustion at the workplace.

Do not breathe mist, vapours, spray.

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Information about fire and explosion protection:

Keep respiratory protective device available.

No special measures required.

Conditions for safe storage, including any incompatibilities:

Storage: Oxidizers, reducing agents, strong bases and metals.

Requirements to be met by storerooms and receptacles:

Store in a cool location.

Protect from humidity and water. Unsuitable material for receptacle: steel.

Unsuitable material for receptacle: aluminium.

Information about storage in one common storage facility:

Do not store together with alkaline products, oxidizers or reducing agents.

Store away from foodstuffs.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

Keep container tightly sealed.

Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters:

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate Engineering Controls: Engineering Measures

Showers. Eyewash Stations. Ventilation Systems.

Individual Protection Measures:

Respiratory protection: Hand protection: Eye protection:	Chemical resistant gloves. Safety goggles or full face shield.
Skin protection:	Use body-covering impervious clothing.
Working hygiene:	Take usual precautions when handling. Workers should wash hands before eating, drinking or smoking.
ortho-Phosphoric Acid	ACGIH TWA 1 mg/m ³

ACGIH STEL 3 mg/m³ OSHA PEL (TWA) 1 mg/m³

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Liquid		
Appearance	Clear liquid.	Odour	Typical.
Colour	Clear blue	Odour Threshold	
<u>Property</u>	<u>Values</u>	<u>Remarks/Method</u>	
	4040		
pH Malting/Engating Daint	1.2-1.8	None known	
Melting/Freezing Point	No data available	None known	
Boiling Point/Range	No data available	None known	
Flash Point	Not applicable.	None known	
Evaporation Rate	Similar	None known	
Flammability (solid, gas)	Not flammable	None known	
Flammability Limit in Air:			
Upper Limit	No data available	None known	
Lower Limit	No data available	None known	
Vapour Pressure	No data available	None known	
Vapour density	No data available	None known	
Specific Gravity	1.12-1.16 g/cm3		
Water Solubility	Soluble in water.	None known	
Solubility Other Solvents	No data available	None known	
Partition Coefficient:			
n-octanol/water	No data available	None known	
Autoignition temperature	No data available	None known	
Decomposition	No data available	None known	
Temperature			
Kinematic Viscosity	No data available	None known	
Dynamic Viscosity	No data available	None known	
Explosive Properties	No data available	None known	
Oxidizing Properties	No date available	None known	
5 1			
Other Properties:			
Softening Point	No data available		
VOC Content %	No data available		
Particle Size	No data available		
Particle Size Distribution	No data available		
Data: October 22, 2016			CDC: Llower Dradwate Ltd LI206 Line and

Date: October 22, 2016

10. STABILITY AND REACTIVITY

Reactivity	Violent exothermic reaction with (some) bases. Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers and with (strong) reducers.
Chemical stability	Stable under recommended handling and storage conditions (see section 7).
Thermal	
decomposition/conditions to avoid:	No decomposition if used and stored according to specifications.
Possibility of hazardous reactions	Not established.
Conditions to avoid	Direct sunlight. Extremely high or low temperatures. Contact with metallic substances.
Hazardous decomposition products	Carbon oxides (CO, CO2). Sodium oxides. Carbon monoxide. Carbon dioxide. Thermal decomposition generates: corrosive vapours and hydrogen chloride.
Materials to avoid	Metals such as aluminum. Reducing agents. Strong acids. Strong bases. Cyanides
Hazardous polymerization	Will not occur

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity: Harmful if swallowed. LD/LC50 values relevant for classification: <u>ortho-Phosphoric Acid CAS# 7664-38-2:</u> LD50 (Oral, rat): 1,530 mg/kg LD50 (Dermal, rat): 2,740 mg/kg On the skin: Causes severe skin irritation and eye damage. (PH: 1.2). On the eye: Causes serious eye damage. (PH: 1.2) Respiratory or Skin Sensitization: Not classified. Additional toxicological information: Carcinogenicity: Chemical Name: none

12. ECOLOGICAL INFORMATION

Toxicity:	Not available
Persistence and Degradability:	Not available
Bioaccumulative Potential:	Not available
Mobility in Soil:	May be harmful to plant growth, blooming and fruit formation.
Other Adverse Effects	Not available
Other Information:	Avoid release to the environment.

13. DISPOSAL

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Ecology – Waste Materials: Avoid release to the environment. Date: October 22, 2016

14. TRANSPORTATION INFORMATION

Canadian T.D.G.: Regulated Material

Proper Shipping Name: Phosphoric acid solution Contains (Phosphoric acid) Hazard Class: 8 ID Number: UN 1805 Packing Group: III



Water Transportation (IMDG): Regulated Material Proper Shipping Name: Phosphoric acid solution Contains (Phosphoric acid) Hazard Class: 8 ID Number: UN 1805 Packing Group: III



Air Transportation (IATA): Regulated Material

Proper Shipping Name: Phosphoric acid solution Contains (Phosphoric acid) Hazard Class: 8 ID Number: UN 1805 Packing Group: III



US DOT: Regulated material Proper Shipping Name: Phosphoric acid solution / hydrochloric acid Contains (Phosphoric acid) Hazard Class: 8 ID Number: UN 1805 Packing Group: III



Date: October 22, 2016

SDS: Hawco Products Ltd H306 Line and Scale remover

15. REGULATORY INFORMATION

Occupational Health & Safety Regulations: WHMIS Classification: Class D - Division 2B, Class E



OSHA & WHMIS: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) and Canadian WHMIS regulations (Controlled Products Regulations under the Hazardous Products Act).

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - All components of this product are listed or are exempt or excluded from listing on the United States Toxic Substances Control Act Section 8(b) Inventory.

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

HMIS III Rating

Health : 3 Serious Hazard

Flammability : 0 Minimal Hazard

Physical: 0 Minimal Hazard

Personal Protection : B SDS US (GHS HazCom 2012 and WHMIS 2015)

16. OTHER INFORMATION

Prepared By: Technical Department

Issuing Date: October 22, 2016

Disclaimer:

The manufacturer warrants that this product conforms to its standard specification when used according to direction. To the best of our knowledge the information contained herein is accurate. However we do not assume accuracy or completeness of the information contained herein.

Final determination of the suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

End of Safety Data Sheet