



Section 01 - Identification

Product Identifier	Scale Zero Ultra
Other Means of Identification	None
Product Use and Restrictions on Use	Lime scale and oxide film remover.
Initial Supplier Identifier	Advance Chemicals Ltd. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
Prepared By	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
24-Hour Emergency Phone	Phone: 1 (306) 664 – 2522

Section 02 - Hazard Identification

GHS-Classification

Skin Corrosion/Irritation	Category 1B
Serious Eye Damage/Irritation	Category 1
STOT-Single Exposure	Category 3

Physical Hazards

Corrosive to Metals	Category 1
----------------------------	------------

Danger

Hazards Statements

H314 – Causes severe skin burns and eye damage.
H335 – May cause respiratory irritation
H290 – May be corrosive to metals

Pictograms



Precautionary Statements

P234 – Keep only in original container

P403 + P233 – Store in a well-ventilated place. Keep container tightly closed.

P405 – Store locked up.

P271 – Use only outdoors or in a well-ventilated area.

P260 – Do not breathe mist, vapours or spray.

P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P280 – Wear protective gloves, protective clothing, eye protection, and face protection

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

P363 – Wash contaminated clothing before reuse.

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

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

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

P390 – Absorb spillage to prevent material damage

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

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Hydrochloric Acid	7647-01-0	10-25%	
Phosphoric Acid	7664-38-2	5-20%	
Water and/or ingredients not classified as hazardous under the Hazardous Products Regulations		55-85%	

Section 04 - First Aid Measures

Inhalation	Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention.
Skin Contact / Absorption	Remove contaminated clothing. Rinse skin with lukewarm water for at least 30 minutes. Seek immediate medical attention. Completely decontaminate clothing, shoes and leather good before re-use or discard.
Eye Contact	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open to ensure complete irrigation of the eye tissue. If a contact lens is present, remove only if easy to do so. Seek immediate medical attention.
Ingestion	NEVER give anything by mouth if victim is rapidly losing consciousness, is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim rinse mouth with water again. Seek immediate medical attention.
Additional Information	This chemical is very toxic. Take proper precautions to ensure your own safety before assisting others. Avoid mouth-to-mouth contact by using mouth guard or shields. NOTE: Any skin or eye contact will also involve significant inhalation exposure.

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media	Use extinguishing media suitable for surrounding media.
Unsuitable Extinguishing Media	Not Available
Specific Hazards Arising From the Chemical	Contact with most metals may produce highly flammable hydrogen gas, which may explode if ignited. During a fire, irritating/toxic phosphorus oxides and hydrogen chloride gas may be released. Above 1500°C, hydrochloric acid dissociates into extremely

flammable hydrogen gas and very toxic and corrosive chlorine gas. Closed containers may rupture violently when heated.

Special Protective Equipment and Precautions for Fire-Fighters Wear NIOSH-approved self-contained breathing apparatus and protective gear.

Further Information Not Available

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so.

Environmental Precautions Prevent material from entering sewers, waterways or confined spaces.

Methods and Materials for Containment and Cleaning Up SMALL SPILLS: Contain and soak up spill with absorbent material which does not react with spilled chemical. Put material in suitable, labelled containers. Flush area with water. Do not get water inside the containers. Contaminated absorbent may pose the same hazards as the spilled material.
LARGE SPILLS: Contact fire and emergency services and supplier for advice.

Section 07 - Handling and Storage

Precautions for Safe Handling Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.

Conditions for Safe Storage Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Keep quantities stored as small as possible. Drums should be vented when received and then at least weekly to relieve internal pressure.

Incompatibilities Metals, sodium, bases, aldehydes, epoxides, reducing and oxidizing agents, cyanides, phosphide, explosives.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Hydrochloric Acid	ACGIH	TLV-C	2ppm
	OSHA	PEL-T-C	5ppm (7mg/m ³)
Phosphoric Acid	ACGIH	TLV-TWA	1mg/m ³
	ACGIH	STEL	3mg/m ³

Engineering Control(s)

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

Other Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Protective Equipment

Eyes/Face Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.

Hand Protection	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Skin and Body Protection	Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse. Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.
Respiratory Protection	NIOSH/OSHA RECOMMENDATIONS FOR HYDROGEN CHLORIDE (GAS) CONCENTRATIONS IN AIR: Up to 50 ppm: Chemical cartridge respirator with cartridge(s) to protect against hydrogen chloride; or gas mask with canister to protect against hydrogen chloride; or powered air-purifying respirator with cartridge(s) to protect against hydrogen chloride; or powered air-purifying respirator with cartridge(s) to protect against hydrogen chloride; or SAR; or full-facepiece SCBA. Above this level, a full face self-contained breathing apparatus is required. NIOSH approved acid gas or organic vapour cartridge(s) are required. EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATION OR IDLH CONDITIONS: Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA. ESCAPE: Gas mask with acid gas canister, or escape-type SCBA.
Thermal Hazards	Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Liquid
Colour	Tan
Odour	Pungent
Odour Threshold	Not Available

Property

pH	1
Melting Point/Freezing Point	<0°C
Initial Boiling Point and Boiling Range	>100°C
Flash Point	Not Applicable
Evaporation Rate	Not Available
Flammability	Non-flammable
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Vapour Pressure (mm Hg, 20°C)	100
Vapour Density (Air=1)	Not Available
Relative Density	Not Available

Solubility(ies)	Soluble in water
Partition Coefficient: n-octanol/water	Not Available
Auto-ignition Temperature	Not Applicable
Decomposition Temperature	Not Available
Viscosity	Not Available
Explosive Properties	None
Specific Gravity (Water=1)	1.15
% Volatiles by Volume	Not Available
Formula	Mixture
Molecular Weight	Not Available

Section 10 - Stability and Reactivity

Reactivity	Not Available
Stability	Normally stable.
Possibility of Hazardous Reactions	None reported.
Conditions to Avoid	High temperatures.
Incompatible Materials	Metals, sodium, bases, aldehydes, epoxides, reducing and oxidizing agents, cyanides, phosphide, explosives.
Hazardous Decomposition Products	During a fire, or when heated to decomposition, irritating/toxic phosphorous oxides such as phosphorus pentoxide may be generated.

Section 11 - Toxicological Information

Acute Toxicity Estimate

Component	Oral LD₅₀	Dermal LD₅₀	Inhalation LC₅₀
Scale Zero Ultra	1,219 mg/kg	4,505 mg/kg	1,182 mg/m ³

This product has been classified in accordance with the Hazardous Products Regulations using ATE formula documented in the GHS standard.

Chronic Toxicity – Carcinogenicity

Component	IARC
Scale Zero Ultra	None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

Skin Corrosion/Irritation	Corrosive. Capable of producing severe burns, blisters, ulcers and permanent scarring.
Ingestion	Can cause burns to the lips, tongue, mouth, esophagus and stomach; abdominal pain; nausea; vomiting; diarrhea and death.

Inhalation	Hydrochloric acid solution readily release high concentrations of hydrogen chloride gas. Inhalation of low concentrations is irritating and can cause coughing, pain, inflammation and swelling in the upper respiratory tract. Severe exposure can result in a potentially fatal accumulation of fluid in the lungs. Symptoms of pulmonary edema can be delayed up to 24 or 48 hours after exposure.
Serious Eye Damage/Irritation	Corrosive. Capable of producing severe eye burns and permanent damage, including blindness.
Respiratory or Skin Sensitization	Not Available
Germ Cell Mutagenicity	Not Available
Reproductive Toxicity	Not Available
STOT-Single Exposure	May cause respiratory irritation.
STOT-Repeated Exposure	Not Available
Aspiration Hazard	Not Available
Synergistic Materials	Not Available

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Hydrochloric Acid	EC ₅₀ (Green algae, 72hr): 0.0492 mg/L	LC ₅₀ (Cyprinus carpio (Common carp), 96 hr): 4.92 mg/L	LC ₅₀ (Shrimp, 48hr): 100-300 ppm
Phosphoric Acid	EC ₅₀ (Pseudokirchneriella subcapitata, 72hr): 32.0mg/L	LC ₅₀ (Oryzias latipes, 96hr): 75.1mg/L	EC ₅₀ (Daphnia magna, 48hr): >376mg/L
Biodegradability	Not Available		
Bioaccumulation	Not Available		
Mobility	Not Available		
Other Adverse Effects	Not Available		

Section 13 – Disposal Considerations

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

Section 14 – Transport Information

UN Number	UN3264
UN Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid)
Transport Hazard Class(es)	8
Packaging Group	II
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special Precautions	Not Available
Transport in Bulk	Not Available

Additional InformationPacking GroupLimited Quantity Index

I	0
II	1 L
III	5 L

TDG**Other**

Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

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

Section 16 – Other Information

Preparation Date

November 13, 2015

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution[®] initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

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

References:

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

Advance Chemicals Ltd. - Locations

Corporate Head Office: 1500 Quebec Avenue, Saskatoon, SK, S7K 1V7

Phone: 1(306) 664 – 2522

Fax: 1(888) 281-8109

www.cleartech.ca

24 Hour Emergency Number - All Locations – 1(306) 664-2522