ALCS-891

SECTION 1. IDENTIFICATION

Product Identifier	ALCS-891
Other Means of Identification	Aluminum Brightener
Recommended Use	Used for the removal of road films and oxidation from stainless steel and aluminum trailers and tankers.
Restrictions on Use	None known.
Manufacturer / Supplier	Transchem Inc., 1225 Franklin Blvd, Cambridge, ON, N1R 7E5, 1-800-265-9100, www.transchem.com
Supplier	Transchem Pro Inc., 350 S. Northwest Highway, Park Ridge, IL, 60068, 1 (877) 857-3870, www.turtlewaxpro.com
Emergency Phone No.	CANUTEC (Canada), 613-996-6666, 24 Hours INFOTRAC (U.S.), 1-800-535-5053, 24 Hours
SDS No.	Ver. 1
Date of Preparation	November 22, 2019

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) - Category 2; Acute toxicity (Dermal) - Category 2; Acute toxicity (Inhalation) - Category 2; Skin corrosion/irritation - Category 1A; Serious eye damage/eye irritation - Category 1

GHS Label Elements

Signal Word:
Danger
Hazard Statement(s):

H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.

Prevention:

P260	Do not breathe dust, fume, gas, mist, vapours or spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash hands and skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	In case of inadequate ventilation wear respiratory protection.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 IF INHALED: Remove 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.

P310 Immediately call a POISON CENTRE/doctor.

Storage:

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

P405 Store locked up.

Disposal:

P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Sulfuric Acid	7664-93-9	10-30	Sulphuric Acid
Phosphoric Acid	7664-38-2	5-10	N/A
AMMONIUM FLUORIDE	12125-01-8	1-5	Ammonium Bi Fluoride

Notes

The specific chemical identity and/or exact percentage of composition (concentration) has been withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Take precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment). Move to fresh air. Immediately call a Poison Centre or doctor. Trained personnel should administer emergency oxygen with a nebulized solution of 2.5% calcium gluconate.

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Take off immediately contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Rinse with lukewarm, gently flowing water for 5 minutes. Immediately call a Poison Centre or doctor. Immediately after water flushing: a. Soak the affected areas in iced 0.13% benzalkonium chloride (Zephiran®) solution. Continue soaks until medical treatment is available. OR b. Wearing chemical protective gloves, massage 2.5% calcium gluconate gel into the burn site. Apply gel frequently and massage continuously until medical treatment is available. If benzalkonium chloride (Zephiran®) or calcium gluconate gel is not available, continue water flushing until medical treatment is available. Double bag, seal, label and leave contaminated clothing, shoes and leather goods at the scene for safe disposal. Chemical burns and pain can be delayed over 24 hours, so immediate treatment to exposure is very important.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a Poison Centre or doctor. DO NOT use benzalkonium chloride (Zephiran®) in the eyes. If sterile 1% calcium gluconate solution is available, limit water flushing for 5 minutes. Then, repeatedly flush the eye(s) using a syringe filled with 1% calcium gluconate solution.

Ingestion

Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Rinse mouth with water. If vomiting occurs naturally, lie on your side in the recovery position. Rinse mouth with water again. Drink large amounts of water. Immediately call a Poison Centre or doctor. Treatment is urgently required.

Most Important Symptoms and Effects, Acute and Delayed

If on skin: contact can cause pain, redness, burns, and blistering. Permanent scarring can result. A severe exposure can cause death. Can be absorbed through the skin causing damage to tissue, organs, and bones. If in eyes: contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result. If swallowed: can burn the lips, tongue, throat and stomach. Permanent damage can result. If inhaled: can cause severe irritation and damage to the respiratory tract.

Immediate Medical Attention and Special Treatment

Target Organs

Skin, eyes, respiratory system, digestive system, skeletal structure.

Special Instructions

General: For burns of moderate areas, (greater than 8 square inches), ingestion and significant inhalation exposure, severe systemic effects may occur, and admission to a critical care unit should be considered. Monitor and correct for hypocalcemia, cardiac arrhythmias,hypomagnesemia and hyperkalemia. In some cases renal dialysis may be indicated.
Inhalation: Treat as chemical pneumonia. Monitor for hypocalcemia, 2.5% calcium gluconate in normal saline by nebulizer or by IPPB with 100% oxygen may decrease pulmonary damage. Bronchodilators may also be administered.
Skin: For deep skin burns or contact with concentrated HF (over 50%) solution, consider infiltration about the affected area with 5% calcium gluconate [equal parts of 10% calcium gluconate and sterile saline for injection]. Burns beneath the nail may require splitting the nail and application of calcium gluconate to the exposed nail bed. For certain burns, especially of the digits, use of intra-arterial calcium gluconate may be indicated.
Eyes: Irrigation may be facilitated by use of Morgan lens or similar ocular irrigator, using 1% aqueous calcium gluconate solution [50ml of calcium gluconate 10% in 500 ml normal saline].

Medical Conditions Aggravated by Exposure

None known.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

Unstable when exposed to fire. Extremely reactive when in contact with carbides, chlorates, nitrates and powdered metals.
In a fire, the following hazardous materials may be generated: corrosive, oxidizing nitrogen oxides; very toxic carbon monoxide, carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Product can release toxic gases and vapours. Review Section 6 (Accidental Release Measures) for important information on responding to leaks/spills.
See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials. Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up. Small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Large spills or leaks: dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Contact emergency services and manufacturer/supplier for advice. Review Section 13 (Disposal Considerations) of this safety data sheet.

Other Information

Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid ALL unprotected contact with this product or with contaminated equipment/surfaces. Do NOT eat, drink or store food in work areas. Avoid release to the environment. Get medical advice/attention for all exposures. Symptoms can be delayed. See Section 13 (Disposal Considerations) of this safety data sheet.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Keep away from heat, sparks, or flames. Store in a closed container. Do not store in metal containers. HF can react with steel, creating iron fluoride, which can cause lung damage when inhaled. Iron fluoride produces HF when contact with water occurs, creating a possibility for unknown exposure. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
AMMONIUM FLUORIDE	2.5 mg/m3		2.5 mg/m3			
Phosphoric Acid	1 mg/m3	3 mg/m3	1 mg/m3			
Sulfuric Acid	1 mg/m3	3 mg/m3	1 mg/m3			

Appropriate Engineering Controls

General ventilation is usually adequate. Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists. Immediate treatment of exposure is crucial. Eye wash and safety shower should be easily accessible and fully functioning. Operation of eye wash and shower should be checked regularly, and just before use of product, to ensure proper functionality. Provide a Hydrofluoric acid first aid kit complete with calcium gluconate gel.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.
Suitable materials are: polyvinyl chloride, neoprene rubber, latex rubber.

Respiratory Protection

Wear a full facepiece NIOSH approved air-purifying respirator with an acid gas cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Pink liquid.
Odour	Acidic
Odour Threshold	Not available
pH	< 1
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.20 - 1.26
Solubility	Very soluble in water

Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic)

Other Information

Physical State	Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Extremely reactive in contact with carbides, chlorates, nitrates, and powdered metals.

Chemical Stability

Unstable under certain conditions - see Conditions to Avoid.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Exposure to fire. Spills. Incompatible materials.

Incompatible Materials

Chlorates, nitrates, carbides. Metals.

Hazardous Decomposition Products

Toxic gases and vapours
When heated corrosive, oxidizing nitrogen oxides; very toxic carbon monoxide, carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Hydrogen Fluoride is corrosive to skin and eyes in tests on animals. Animal inhalation studies at very high concentrations resulted in eye, mucous membrane and skin irritation, corneal opacities, respiratory distress, pulmonary congestion, and hemorrhage. Other short term studies show lung, heart, liver, kidney, spleen, and brain damage. Repeated exposure caused an uptake of fluoride into bones and teeth, corneal opacities, irritation or ulceration of skin, respiratory irritation and edema, anemia, weight loss, and pathological changes in the liver, lungs and kidneys. Long-term exposure to low concentrations by inhalation resulted in fatty deposits in the liver, high plasma concentrations of cholesterol, kidney damage and disturbances in the process involved in calcification. Fluoride was taken up by bones and teeth. Single dermal exposure to low concentrations resulted in severe burns. Other studies show increased fluoride content in the serum, lungs, liver and kidneys.

Likely Routes of Exposure

Inhalation; skin contact; skin absorption; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
AMMONIUM FLUORIDE		130 mg/kg (rat)	
Phosphoric Acid		1530 mg/kg (rat)	2740 mg/kg (rabbit)
Sulfuric Acid	255 mg/m3 (rat) (4-hour exposure)	2140 mg/kg (rat)	

Skin Corrosion/Irritation

Human experience shows skin corrosion. Contact can cause pain, redness, burns, and blistering. Permanent scarring can result. Appearance of chemical burns and pain from contact may be delayed up to 12 hours or longer.

Serious Eye Damage/Irritation

Human experience shows serious eye damage. Contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Inhalation of mists will cause severe irritation and damage to the respiratory tract. Vapours may irritate eyes, skin and respiratory tract.

Skin Absorption

(Hydrogen Fluoride) is readily absorbed through the skin. Absorption through skin is not always immediately apparent from burns or pain. Causes damage to organs based on human experience. Causes severe metabolic disturbances resulting in irregular heartbeat and depression of the central nervous system. Symptoms may include headache, nausea, vomiting, dizziness, drowsiness, confusion and convulsions.

Ingestion

Product may be harmful or fatal if swallowed. Causes severe irritation or burns to the mouth, throat and stomach. Causes damage to organs based on human experience. Causes severe metabolic disturbances resulting in irregular heartbeat and depression of the central nervous system. Symptoms may include headache, nausea, vomiting, dizziness, drowsiness, confusion and convulsions.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Repeated exposure carries the same risks as single exposure. Long term exposure to HF could cause fluorosis, resulting in weight loss, anemia, brittle bones, and poor health.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Strong inorganic acid mists containing sulfuric acid have been known to cause cancer.

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Hydrogen fluoride and sulfuric acid are not biodegradable, but are easily soluble in water.

Toxicity

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
AMMONIUM FLUORIDE	364 mg/L (Pimephales promelas (fathead minnow); 96-hour; static)			
Phosphoric Acid	138 mg/L (96-hour)			
Sulfuric Acid	49 mg/L (Lepomis macrochirus (bluegill); 48-hour)			

Bioaccumulative Potential

This product and its degradation products are not expected to bioaccumulate.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Review federal, state/provincial, and local government requirements prior to disposal.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	3264	CORROSIVE LIQUID, Acidic, Inorganic (Hydrogen Fluoride, Sulfuric acid, Phosphoric acid)	Class 8	II
Canadian TDG	3264	CORROSIVE LIQUID, Acidic, Inorganic (Hydrogen Fluoride, Sulfuric acid, Phosphoric)	Class 8	II

Special Precautions for User Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

Additional USA Regulatory Lists

California Proposition 65: If misted, Sulfuric Acid (CAS: 7664-93-9)
New Jersey Right To Know: Phosphoric acid (CAS: 7664-38-2); Hydrogen Fluoride (CAS: 7664-39-3); Sulfuric Acid (CAS: 7664-93-9).
SARA Title III - Section 313: If misted, Sulfuric Acid (CAS: 7664-93-9).

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 3** **Flammability - 0** **Instability - 0**

SDS Prepared By Technical Group

Date of Preparation November 22, 2019

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