# MATERIAL SAFETY DATA SHEET

**Hawco Products Ltd.** **Aluminum Cleaner # 2 Clear. H 780**

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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| **PRODUCT NAME:** | Aluminum Cleaner Clear | **PRODUCT USE:** | Aluminum Cleaner. |
| **MANUFACTURER;** | Hawco Products Ltd. | **SUPPLIER** | Hawco Products Ltd. |
| **ADDRESS:** | 61 Shaver Street, po box 1507<br>Brantford, Ontario, N3T 5V6 | **ADDRESS:** | 61 Shaver Street, po box 1507<br>Brantford, Ontario, N3T 5V6 |
| **EMERGENCY :** | 519-759-2443 | **EMERGENCY :** | 519-759-2443 |

## SECTION II: INGREDIENT INFORMATION

| Ingredients | CAS# | Wt% | OSHA-PEL | ACGIH-TLV | $LD_{50}$ |
|---|---|---|---|---|---|
| Ammonium bifluoride | 1341-49-7 | 1-5 % | 2 .5 mg/m3 (as F) | 2 .5 mg/m3 (as F) | 60-130 mg/kg (Oral/Rat) |
| Citric Acid | 77-92-9 | 1-5% | Not applicable | Not applicable | 3,000 mg/kg ( oral/rat) |
| Alcohol Ethoxylate | 68991-48-0 | 1-5 % | Not applicable | Not Applicable | 2,000 mg/kg ( Oral/Rat) |
| Phosphoric acid | 7664-38-2 | 7-15 % | Not applicable | Not Applicable | 1,530 mg/kg ( Oral/Rat) |
| Sulphuric acid | 7664-93-9 | 7- 15% | Not applicable | Not Applicable | 2,140 mg/kg ( Oral/Rat) |

## SECTION III: HAZARDOUS IDENTIFICATION

***POTENTIAL HEALTH EFFECTS***

**Routes of entry:** Inhalation, ingestion, skin and eye contact.

**Emergency Overview:** Danger! Extremely corrosive! Causes severe burns and eye damage.

**Signs and symptoms of short-term (acute) exposure:**

*Inhalation:* Irritating and/or corrosive to the eyes, nose, throat and lungs. Irritating to the eyes, nose, throat and lungs. High concentration of vapours will cause irritation, or if inhaled as a mist. Excessive exposure may cause irritation to upper respiratory tract.

*Skin contact:* Corrosive to the skin. Skin contact may cause serious skin burns, which may not be immediately apparent or painful. Symptoms may be delayed 12 hours or longer. The fluoride ion readily penetrates the skin causing destruction of deep tissue layers and even bone. .

*Eye contact:* Contact can result in corneal damage or blindness. Immediate pain, severe burns.

*Ingestion:* Harmful or fatal if swallowed. May burn mouth, throat and stomach.

**Effects of long-term (chronic) exposure:** See Section 11

## SECTION IV: FIRST AID MEASURES

**Inhalation:** Remove victim to fresh air. If symptoms persist, call a physician. Ammonium bifluoride contains Hydrofluoric acid (HF)

**Skin contact:** Flush skin with plenty of water, for at least 15 minutes, while removing contaminated clothing. Limit washing to 5 minutes if treatment specific to Hydrofluoric acid is available. The effect of HF, i.e. onset of pain, particularly in dilute solutions, may not be felt for up to 24 hours. It is important, therefore, that persons using HF apply calcium gluconate gel in order that first aid treatment can be commenced immediately.

Call physician immediately. Wash contaminated clothing before reuse.

**Eye contact:** IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention immediately.

**Ingestion:** Immediately call physician. DO NOT induce vomiting. Give several glasses of water. Never give anything by mouth if victim is unconscious or convulsing.

**Note to Physician for Hydrogen fluoride (HF) exposure:**

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].

## SECTION V: FIRE FIGHTING MEASURES

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| **Flammability:** | Not flammable. |
| **Flash Point deg (C,TCC) :** | Not applicable. |
| **Means of Extinction:** | As appropriate for surrounding fire. Use water, dry chemical, carbon dioxide or foam |
| **Special Fire Hazards:** | Fire fighters should wear self contained breathing apparatus as for surrounding fire. |
| **Autoignition temperature:** | Not applicable. |
| **Flame propagation or burning rate of solid:** | Not applicable. |
| **Sensitivity to static discharge:** | Not applicable |
| **Unusual Fire and Explosion Hazards.** | As per surrounding fire. |
| **Hazardous decomposition products:** | Oxides of carbon, oxides of nitrogen and fluoride. |

## SECTION VI: ACCIDENTAL RELEASE MEASURES

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| **Leak and Spill Procedures:** | Before attempting clean up, refer to the hazard data provided above. Small spills may be absorbed with non reactive absorbent and placed is suitable, covered, labeled container. For large quantities, dispose of in accordance with local, provincial/ state or federal regulations. For large spills prevent from entering sewers and waterways. For large spills provide diking to prevent spreading. |

## SECTION VII: HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN.

Handling (Personnel)
Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.
Keep containers closed.
Storage
Keep away from heat, sparks, and flame. Keep container tightly closed. Drainage facilities should be constructed for containment of small spills.
NOTE:
HF may react with steel, forming iron fluorides. During storage tank cleaning, iron fluoride particles may be released which, if inhaled, may cause lung damage. Iron fluoride scale reacts with water to produce HF, which may cause delayed burns when skin or eye contact occurs.

## SECTION VIII: EXPOSURE CONTROL/PERSONAL PROTECTION

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| **Gloves:** | Impervious neoprene gloves required at all times. |
| **Eye Protection:** | Chemical splash goggles required |
| **Respiratory Protection:** | Not normally required if good ventilation is maintained In case of insufficient ventilation, wear suitable respiratory equipment. |
| **Other Protective Equipment:** | As required by employer code. Eye bath, safety shower, protective clothing. Full body covering acid resistant body covering including acid resistant boots. |
| **Engineering Controls:** | General ventilation normally required |

## SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

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| **Boiling Point ( deg C)** | Not available | **Specific Gravity ($H_20$ = 1):** | 1.01-1.02 | **Evaporation Rate (water=1):** | Similar |
| **% Volatile (Wt%):** | Not av | **Solubility in water:** | Complete | **pH (as supplied):** | 4.0-5.0 |
| **Physical State:** | Liquid | **Viscosity:** | water like | | |
| **Appearance / Odour:** | Water white to slightly hazy liquid . | | | | |

## SECTION X: STABILITY AND REACTIVITY

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| **Conditions for Chemical Instability:** | Normally Stable |
| **Incompatible Materials:** | Strong oxidizing agents, strong alkalies. |
| **Hazardous Decomposition Products:** | Oxides of carbon, Oxides of Nitrogen when heated. |

## SECTION XI: TOXICOLOGICAL INFORMATION

Animal Data
Hydrogen Fluoride
Inhalation 1 hour LC50: 2300 ppm in rats
Skin absorption 1-2 minute ALD: 500 mg/kg in mice
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.

## SECTION XII: ECOLOGICAL INFORMATION

Not available.

## SECTION XIII: DISPOSAL CONSIDERATIONS

Dispose of in accordance to all local, provincial/state and federal regulations.

## SECTION XIV: TRANSPORTATION

TDG Canada
Corrosive, Toxic (Ammonium Hydrogen bi fluoride), Class 8, UN 2817, PG III.

## SECTION XV: REGULATORY INFORMATION

**Occupational Health and Safety Regulations:**

**WHMIS Class:** Class D-2A: Material causing other toxic effects (VERY TOXIC).
Class E Corrosive Liquid
MSDS prepared pursuant to the Hazard Communication Standard ( CFR29.1920.1200) and Canadian WHMIS regulations
Class E Corrosive Material.

**OSHA & WHMIS:**

**Environmental Regulatory Lists:**

**Toxic Substances Control Act (TSCA)** All ingredients are registered on the Chemical Substances Inventory.

**Canadian Domestic Substance List (DSL):** All ingredients are registered on the DSL

## SECTION XVI: OTHER INFORMATION

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|---|---|---|---|---|
| **Date:** | 8 October 2014 | **Prepared By:** | Technical service department | **Telephone:** 519-759-2443 |

**Disclaimer:**
**Information for this material safety data sheet was obtained from sources considered tehnically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond the control of supplier, it is assumed that users of this material; have been fully trained according to the mandatory requirements of WHMIS. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries for consequential damages, which may result from the use or reliance on any information contained in this form. If user requires independent information on ingredients in this or other material, we recommend contact with the Canadian Centre for Occupational Health and Safety (CCOHS) in Hamilton, Ontario (905-572-4400) or CSST on Montreal, Quebec (514-873-3990).**