

## SECTION 1 – STATEMENT OF CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>SUPPLIER:</b>	Auto Klene Solutions Aust. Pty Ltd		
<b>ADDRESS:</b>	885 Mountain Highway, Bayswater, 3153 VIC		
<b>Trade Name:</b>	<b>ACID KLENE WA</b>		
<b>TELEPHONE:</b>	03 8761 1900	<b>FAX:</b>	03 8761 1955
<b>AH EMERGENCY TELEPHONE:</b>	1300 774 575 in Australia (M-F 7am-7pm)	<b>Synonym:</b>	2579WA
<b>Substance:</b>	Aqueous acidic	<b>Product Use:</b>	Aluminium cleaner and brightener
<b>Creation Date:</b>	27 November 2023	<b>Revision Date:</b>	27 November 2028

## SECTION 2 – HAZARDS IDENTIFICATION

### Classification of the substance or mixture

<b>Dangerous Goods</b>	Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail".
<b>GHS Classification</b>	Acute Toxicity (Oral) - Category 3 Acute Toxicity (Dermal) - Category 2 Skin Corrosion - Category 1A Skin Sensitizer - Category 1 Eye Damage - Category 1 Acute Toxicity (Inhalation) – Category 2 Germ cell mutagenicity - Category 2
<b>Poisons Schedule</b>	S7 (Hydrofluoric Acid)

### Label elements

<b>GHS label pictograms</b>	
<b>Signal word</b>	<b>DANGER</b>

### Hazard statement(s)

<b>H301</b>	Toxic if swallowed.
<b>H310</b>	Fatal in contact with skin.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H317</b>	May cause an allergic skin reaction.
<b>H330</b>	Fatal if inhaled.
<b>H341</b>	Suspected of causing genetic defects.

### Precautionary statement(s): General

<b>P102</b>	Keep out of reach of children.
<b>P103</b>	Read carefully and follow all instructions.

### Precautionary statement(s): Prevention

<b>P201</b>	Obtain special instructions before use.
<b>P202</b>	Do not handle until all safety precautions have been read and understood.
<b>P264</b>	Wash contaminated skin thoroughly after handling.
<b>P270</b>	Do not eat, drink or smoke when using this product.
<b>P262</b>	Do not get in eyes, on skin or on clothing.

<b>P280</b>	Wear protective gloves, protective clothing and face protection.
<b>P260</b>	Do not breathe mists, fumes, vapours or spray.
<b>P272</b>	Contaminated work clothing should not be allowed out of the workplace.
<b>P271</b>	Use only outdoors or in a well-ventilated area.
<b>P284</b>	In case of inadequate ventilation, wear respiratory protection.
<b>Precautionary statement(s): Response</b>	
<b>P301+P310</b>	IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
<b>P301+P330+P331</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
<b>P303+P361+353</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
<b>P310</b>	Immediately call a POISON CENTRE or doctor.
<b>P361+P364</b>	Take off immediately all contaminated clothing and wash it before reuse.
<b>P304+P340</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
<b>P310</b>	Immediately call a POISON CENTRE or doctor.
<b>P320</b>	Specific treatment is urgent (see first aid section of this SDS).
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P308+P313</b>	IF exposed or concerned: Get medical attention.
<b>Precautionary statement(s): Storage</b>	
<b>P405</b>	Store locked up.
<b>P403+P233</b>	Store in a well-ventilated place. Keep container tightly closed.
<b>Precautionary statement(s): Disposal</b>	
<b>P501</b>	Dispose of contents and container in accordance with local regulations.
<b>Note</b>	
<b>IMPORTANT</b>	This SDS and the Hazard Classifications contained therein, only apply to the product in its concentrated form, as supplied.

## SECTION 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Proportion (%w/w):
Sulphuric acid	7664-93-9	0-5
Ammonium Bifluoride (Liberates HF)	1341-49-7	0-4
Non-hazardous ingredients at the concentrations used	NA	balance

## SECTION 4 – FIRST AID MEASURES

<b>Inhalation</b>	<p>If fumes or combustion products are inhaled, remove person from contaminated area. Lay person down. Keep warm and rested. Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</p> <p>Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. If person is conscious, give six calcium gluconate or calcium carbonate tablets in water by mouth.</p> <p>Transport to hospital, or doctor, without delay.</p> <p>Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. Corrosive substances may cause lung damage (e.g., lung oedema, fluid in the lungs). As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.</p> <p>Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.</p>
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	<p>This must definitely be left to a doctor or person authorised.</p>
<b>Skin contact</b>	<p>Avoid further contact. Immediately remove contaminated clothing, including footwear.          Flush skin under running water for 15 minutes.          Avoiding contamination of the hands, massage calcium gluconate gel into affected areas, pay particular attention to creases in skin.          Contact the Poisons Information Centre.          Continue gel application for at least 15 minutes after burning sensation ceases.          If pain recurs, repeat application of calcium gluconate gel or apply every 20 minutes.          If no gel is available, continue washing for at least 15 minutes, using soap if available. If person is conscious, give six calcium gluconate or calcium carbonate tablets in water by mouth.          Transport to hospital, or doctor, urgently.</p>
<b>Eye contact</b>	<p>Immediately hold eyelids apart and flush the eye continuously with running water.          Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.          Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.          Transport to hospital or doctor without delay.          Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</p>
<b>Ingestion</b>	<p>For advice, contact a Poisons Information Centre or a doctor immediately.          Urgent hospital treatment is likely to be needed.          If swallowed do NOT induce vomiting.          If vomiting occurs, lean person forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.          Observe the person carefully.          Never give liquid to a person showing signs of being sleepy or with reduced awareness (i.e., becoming unconscious).          Give water to rinse out mouth, then provide liquid slowly, as much as the person can comfortably drink. Transport to hospital or doctor without delay.</p>
<b>Advice to Doctor</b>	<p>Subcutaneous injections of Calcium Gluconate may be necessary around the burnt area. Continued application of Calcium Gluconate Gel or subcutaneous Calcium Gluconate should then continue for 3-4 days at a frequency of 4-6 times per day. If a "burning" sensation recurs, apply more frequently.          Systemic effects of extensive hydrofluoric acid burns include renal damage, hypocalcaemia and consequent cardiac arrhythmias. Monitor haematological, respiratory, renal, cardiac and electrolyte status at least daily. Tests should include FBE, blood gases, chest X-ray, creatinine and electrolytes, urine output, Ca ions, Mg ions and phosphate ions.          Continuous ECG monitoring may be required.          Where serum calcium is low, or clinical, or ECG signs of hypocalcaemia develop, infusions of calcium gluconate, or if less serious, oral Sandocal, should be given. Hydrocortisone 500 mg in a four to six hourly infusion may help. Antibiotics should not be given as a routine, but only when indicated. Eye contact pain may be excruciating and 2-3 drops of 0.05% pentocaine hydrochloride may be instilled, followed by further irrigation.</p>

## SECTION 5 – FIRE FIGHTING MEASURES

<b>Fire and Explosion Hazards</b>	<p>Non-combustible. Not considered to be a significant fire risk, Acids may react with metals to produce hydrogen, a highly flammable and explosive gas. Heating may cause expansion or decomposition leading to violent rupture of rigid containers. May emit acrid smoke. May emit corrosive and poisonous fumes. Decomposition may produce toxic fumes of hydrogen fluoride and sulphur oxides (SOx). May emit corrosive fumes.</p>
<b>Extinguishing Media</b>	<p>Foam, dry chemical powder or carbon dioxide</p>

<b>Fire Fighting</b>	Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use firefighting procedures suitable for surrounding area. Do NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.
<b>Flash Point</b>	Does not flash
<b>Hazchem</b>	2W

## SECTION 6 – ACCIDENTAL RELEASE MEASURES





<b>Emergency Procedures</b>	<p>Wear PPE in accordance with Section 8 of this SDS. Minor spill: Clean up spill immediately. Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Place in a suitable, labelled container for waste disposal.</p> <p>Major spill: Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Increase ventilation. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water courses. Place inert absorbent material onto spillage. Collect the material and place into a suitable, labelled container. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.</p>
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## SECTION 7 – HANDLING AND STORAGE

<b>Handling</b>	DO NOT allow clothing wet with material to stay in contact with skin. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. <b>WARNING:</b> To avoid violent reaction, ALWAYS add material to water and NEVER water to material. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke.
<b>Storage</b>	Store locked up, in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store only in original containers. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks. This material is classified as a Class 8 Corrosive as per the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and/or the "New Zealand NZ55433: Transport of Dangerous Goods on Land" and must be stored in accordance with the relevant regulations.

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Exposure Limits</b>	<p>National Occupational Exposure Limits, as published by Safe Work Australia:</p> <p><b>Time-weighted Average (TWA):</b> None established for product. For ingredients: Sulphuric Acid: 1 mg/m<sup>3</sup></p> <p><b>Short Term Exposure Limit (STEL):</b> None established for product. For ingredients: Sulphuric Acid: 3 mg/m<sup>3</sup></p> <p><b>Peak:</b> None established for product. For ingredients: Hydrofluoric acid: 2.6 mg/m<sup>3</sup> (3ppm)</p>
<b>Ventilation</b>	Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.
<b>Personal Protective Equipment</b>	Use good occupational work practice. The use of protective clothing and equipment depends upon the degree and nature of exposure. The following protective equipment should be available;

<p><b>Eye Protection</b></p> 	<p>Safety glasses and chemical goggles should be used. A face shield may be required for face protection, however must be used for supplementary protection, never primary protection, of eyes. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.</p>
<p><b>Hand Protection</b></p> 	<p>Wear elbow-length PVC gloves. Final choice of appropriate gloves will vary according to individual circumstances. i.e., methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.</p>
<p><b>Body Protection</b></p> 	<p>Suitable protective workwear (e.g., rubber or plastic apron, sleeves, rubber boots and PVC protective suit) are recommended. When handling liquids, wear protective clothing outside of boots to avoid spills entering boots.</p>
<p><b>Respirator</b></p> 	<p>If engineering controls are not effective in controlling airborne exposure, then a Type ABE-P filter respirator should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.</p>

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid	<b>Colour</b>	Clear green
<b>Odour</b>	Acidic	<b>Specific Gravity</b>	1.1 @ 25°C
<b>Boiling Point</b>	>100°C	<b>Freezing Point</b>	Not available
<b>Vapour Pressure</b>	Not available	<b>Vapour Density</b>	Not available
<b>Flash Point</b>	Non-flammable	<b>Flammable Limits</b>	none
<b>Water Solubility</b>	Miscible in all proportions	<b>pH</b>	1-2

## SECTION 10 – STABILITY AND REACTIVITY

<p><b>Reactivity</b></p>	<p>Stable at normal temperatures and pressure. Contact with alkaline material liberates heat. Reacts with mild steel, galvanised steel, zinc producing hydrogen gas which may form an explosive mixture with air. Material is corrosive to most metals, glass and other siliceous materials</p>
<p><b>Conditions to Avoid</b></p>	<p>Extremes of temperature and direct sunlight. Avoid strong bases and chlorinated products. Segregate from alkalies, oxidising agents and chemicals readily decomposed by acids (i.e. cyanides, sulfides, carbonates).</p>
<p><b>Incompatibilities</b></p>	<p>Hydrofluoric Acid:            -Reacts violently with strong oxidisers, acetic anhydride, alkalis, 2-aminoethanol, arsenic trioxide (with generation of heat), bismuthic acid, calcium oxide, chlorosulfonic acid, cyanogen fluoride, ethylenediamine, ethyleneimine, fluorine (fluorine gas reacts vigorously with a 50%            -Reacts (possibly violently) with aliphatic amines, alcohols, alkanolamines, alkylene oxides, aromatic amines, amides, ammonia, ammonium hydroxide, epichlorohydrin, isocyanates, metal acetylides, metal silicides, methanesulfonic acid, nitrogen compounds, organic anhydrides, oxides, silicon compounds, vinylidene fluoride            -Attacks glass and siliceous materials, concrete, ceramics, metals (flammable hydrogen gas may be produced), metal alloys, some plastics, rubber coatings, leather, and most other materials with the exception of lead, platinum, polyethylene, wax.</p>
<p><b>Hazardous Decomposition</b></p>	<p>Decomposition may produce toxic fumes of carbon dioxide, hydrogen fluoride and other pyrolysis products typical of burning organic material.</p>

## SECTION 11 – TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

<b>Inhalation</b>	Inhalation of vapours, mists, fumes or spray, generated by the material during the course of normal handling, may produce toxic effects. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may also be dizziness, headache, nausea and weakness.
<b>Skin contact</b>	Skin contact with the material may produce toxic effects; systemic effects may result following absorption. The material can produce chemical burns following direct contact with the skin. Healing is delayed and death of tissue may continue to spread beneath skin.
<b>Eye contact</b>	The material can produce chemical burns resulting in severe eye damage following direct contact. Vapours or mists may be extremely irritating. Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely.
<b>Ingestion</b>	Severely toxic effects may result from the accidental ingestion of the material. The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident.
<b>Chronic</b>	Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs.
<b>Respiratory Sensitisation</b>	Not expected to be a respiratory sensitizer.
<b>Skin Sensitisation</b>	Considered to be a skin sensitizer.
<b>Germ cell mutagenicity</b>	Considered to be a mutagenic hazard.
<b>Reproductive Toxicity</b>	Not considered to be toxic to reproduction.
<b>STOT-single exposure</b>	Not expected to cause toxicity to a specific target organ.
<b>STOT-repeated exposure</b>	Not expected to cause toxicity to a specific target organ.
<b>Aspiration Hazard</b>	Not expected to be an aspiration hazard.

## SECTION 12 – ECOLOGICAL INFORMATION

<b>Eco-toxicity</b>	Harmful to aquatic life due to low pH.
<b>Persistence and degradability</b>	Not available
<b>Bio accumulative potential</b>	Not available
<b>Mobility in soil</b>	Not available
<b>Other adverse effects</b>	Not available
<b>Environmental Protection</b>	Do not discharge this material into waterways.

## SECTION 13 – DISPOSAL CONSIDERATIONS

	Dispose of waste according to applicable local and national regulations. Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes including emptied containers are controlled wastes and should be disposed of in accordance with all applicable local and national regulations.
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## SECTION 14 – TRANSPORT INFORMATION

<b>ADG</b>	Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail".
<b>Marine Pollutant</b>	No
<b>Land Transport (ADG)</b>	
<b>UN Number</b>	2922
<b>Proper Shipping Name</b>	CORROSIVE LIQUID, N.O.S. (CONTAINS HYDROFLUORIC AND SULPHURIC ACIDS)
<b>Class/Sub-Class</b>	8
<b>HAZCHEM Code</b>	2W
<b>Packing Group</b>	II

<b>ERG</b>	37
<b>Limited Quantity</b>	1L
<b>Segregation</b>	Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7) or food and food packaging in any quantity. Note 1: Concentrated strong acids are incompatible with concentrated strong alkalis. Exemptions may apply.

## SECTION 15 – REGULATORY INFORMATION

<b>GHS Classification</b>	Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.
<b>SUSMP</b>	S7 (Hydrofluoric Acid)
<b>ADG Code</b>	Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail".
<b>AICS</b>	All ingredients present on AICS

## SECTION 16 – OTHER INFORMATION

<b>Issue Date</b>	27 November 2023
<b>Version Number</b>	V9: UN number update
<b>Abbreviations and acronyms</b>	<p><b>ADG Code:</b> Australian Code for the Transport of Dangerous Goods by Road and Rail.</p> <p><b>AICS:</b> Australian Inventory of Chemical Substances.</p> <p><b>CAS Number:</b> Chemical Abstracts Service Registry Number.</p> <p><b>GHS:</b> Globally Harmonized System of Classification and Labelling of Chemicals</p> <p><b>HAZCHEM:</b> An emergency action code which gives information to emergency services.</p> <p><b>HCIS:</b> Hazardous Chemical Information System</p> <p><b>SWA:</b> Safe Work Australia.</p> <p><b>SDS:</b> Safety Data Sheet</p> <p><b>STEL:</b> Short Term Exposure Limit.</p> <p><b>SUSMP:</b> Standard for the Uniform Scheduling of Medicines and Poisons.</p> <p><b>TWA:</b> Time Weighted Average.</p> <p><b>UN Number:</b> United Nations Number.</p>
<b>Literature references</b>	<p>Preparation of Safety Data Sheets for Hazardous Chemicals – Code of Practice (Safe Work Australia)</p> <p>GHS Hazardous Chemical Information List (Safe Work Australia)</p> <p>Guidance on the Classification of Hazardous Chemicals under the WHS Regulations.</p> <p>Global Harmonized System of Classification and Labelling of Chemicals (GHS)</p> <p>“Australian Exposure Standards”. Safe Work Australia</p> <p>Australian Code for The Transport of Dangerous Goods by Road and Rail</p> <p>Standard for the Uniform Scheduling of Medicines and Poisons</p>
<b>Disclaimer</b>	This SDS summarizes at the date of issue our best knowledge of the health and safety hazard information of this product, and in particular how to safely handle and use this product in the workplace. Since the supplier cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this SDS in the context of how the user intends to handle and use the product in the workplace. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this supplier.

**End of SDS**