SAFETY DATA SHEET

Product Name: DUO WASH PART A

Date of Issue: AUGUST 2025

SECTION 1 – STATEMENT OF CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER:	Chiefs Australia		
ADDRESS:	3/6 Textile Avenue, Warana Qld 4575		
Trade Name:	**DUO WASH PART A**		
TELEPHONE:	07 5493 8868	**FAX:**	techsupport@chiefsaustralia.com
AH EMERGENCY TELEPHONE:	1300 774 575 in Australia (M-F 7am-7pm)	**Synonym:**	Aluminium Cleaner/Brightener. Wheel Cleaner
Substance:	AMMONIUM HYDROGEN-DIFLUORIDE SOLUTION	**Product Use:**	Aluminium Cleaner/Brightener. Wheel Cleaner
Creation Date:	AUGUST 2025	**Revision Date:**	AUGUST 2030

SECTION 2 – HAZARDS IDENTIFICATION

Classification of the substance or mixture	
Dangerous Goods	Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail".
GHS Classification	Corrosive to Metals - Category 1 Skin Corrosion - Category 1 Serious Eye Damage - Category 1 Specific Target Organ Toxicity (Single Exposure) - Category 3 Respiratory Tract Irritation
Poisons Schedule	S6 Poison (Hydrogen fluoride)
Label elements	
GHS label pictograms	
Signal word	**DANGER**
Hazard statement(s)	
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
Precautionary statement(s): General	
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
Precautionary statement(s): Prevention	
P201	Obtain special instructions before use.
P234	Keep only in the original packaging.
P260	Do not breathe mists.
P262	Do not get in the eyes, on the skin, or on the clothing.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye and face protection.
P281	Use personal protective equipment as required.
Precautionary statement(s): Response	

P101	If medical advice is needed, have product container or label at hand.
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 [or shower].
P363	Wash contaminated clothing before reuse.
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 doctor.
P390	Absorb spillage to prevent material damage.
Precautionary statement(s): Storage	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in a corrosive-resistant insert, an appropriate compatible material container with a resistant inner liner.
Precautionary statement(s): Disposal	
P501	Dispose of contents and container in accordance with local regulations.
Note	
IMPORTANT	Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land". Refer to Section 11 for additional information.
Dangerous Goods Class:	8

SECTION 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Proportion (%w/w):
Hydrofluoric Acid (HF)	7664-39-3	< 1
Sulphuric Acid	7664-93-9	< 5
Non-Hazardous ingredients	NA	balance

SECTION 4 – FIRST AID MEASURES

Inhalation	If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. 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. Transport to hospital, or doctor, without delay. 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. Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered. This must definitely be left to a doctor or person authorised.

	For massive exposures: If dusts, vapours, aerosols, fumes or combustion products are inhaled, remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. 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 victim is conscious, give six calcium gluconate or calcium carbonate tablets in water by mouth. Transport to hospital, or doctor, urgently.
Skin contact	If there is evidence of severe skin irritation or skin burns: 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 patient is conscious, give six calcium gluconate or calcium carbonate tablets in water by mouth. Transport to hospital, or doctor, urgently.
Eye contact	If this product comes in contact with the eyes: 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.
Ingestion	For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient 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 easily drink. Transport to hospital or doctor without delay.
Advice to Doctor	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.

SECTION 5 – FIRE FIGHTING MEASURES	
Fire and Explosion Hazards	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.
Extinguishing Media	Water spray or fog, Foam, Dry chemical powder, BCF (where regulations permit), Carbon dioxide.
Fire Fighting	Alert the Fire Brigade and tell them the location and nature of the 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 the 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.
Flash Point	Does not flash.
Hazchem	2X

SECTION 6 – ACCIDENTAL RELEASE MEASURES	
Emergency Procedures	Wear PPE in accordance with Section 8 of this SDS. Minor spill: 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. Major spill: Prevent spillage from entering drains or water courses. Wear appropriate personal protective equipment and clothing to prevent exposure. Increase ventilation. If possible, contain the spill. 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.

SECTION 7 – HANDLING AND STORAGE	
Handling	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. WARNING: 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.

Storage	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 NZS5433: Transport of Dangerous Goods on Land" and must be stored in accordance with the relevant regulations.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits	National Occupational Exposure Limits, as published by Safe Work Australia: **Time-weighted Average (TWA):** None established for product. For ingredients: • Sulphuric Acid: 1 mg/m^3 **Short Term Exposure Limit (STEL):** None established for product. For ingredients: • Sulphuric Acid: 3 mg/m^3 **Peak:** None established for product. For ingredients: • Hydrofluoric acid (HF): 2.6 mg/m^3 (peak)
Ventilation	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. 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.
Personal Protective Equipment	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;
Eye Protection 	Safety glasses, chemical goggles or face shield should be used. 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.
Hand Protection 	Wear gloves of impervious material such as PVC. 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.
Body Protection 	Suitable protective workwear, e.g., rubber or plastic apron, sleeves, rubber boots and cotton overalls buttoned at neck and wrist are recommended. A chemical resistant PVC apron is also recommended.

Respirator 	If engineering controls are not effective in controlling airborne exposure, then an approved respirator with a replaceable mist filter 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.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Colour**	Clear
Odour	Nil	**Specific Gravity**	0.90
pH	1-2		

SECTION 10 – STABILITY AND REACTIVITY

Reactivity	Stable at normal temperatures and pressure. Contact with alkaline material liberates heat. Reacts with mild steel, galvanised steel, zinc.
Conditions to Avoid	Extremes of temperature and direct sunlight. Avoid strong bases and chlorinated products.
Incompatibilities	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..
Hazardous Decomposition	Thermal decomposition may result in the release of toxic and/or irritating fumes. Contact with metals may evolve flammable hydrogen gas.

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:

Inhalation	Harmful if inhaled. Material is an irritant to the mucous membranes and the respiratory tract. Inhalation of vapours or aerosols (mists, fumes), 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 be dizziness, headache, nausea and weakness.

Skin contact	Systemic effects may result following absorption. The material can produce chemical burns following direct contact with the skin. Fluorides are easily absorbed through the skin and cause death of soft tissue and erode bone. Healing is delayed and death of tissue may continue to spread beneath skin. Open cuts, abraded or irritated skin should not be exposed to this material Contact of the skin with liquid hydrofluoric acid (hydrogen fluoride) may cause severe burns, erythema, and swelling, vesiculation, and serious crusting. Dermal burns may not be readily noticed or painful, unlike the warning properties of other acids. A solution of only 1-2% HF exposed to greater than 10% of the body may be fatal without medical attention; however dermal burns are not likely immediate. Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. Entry into the bloodstream, though, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye contact	Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury. Specifically, the material can produce chemical burns to the eye following direct contact. 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. Vapours or mists may be extremely irritating. If applied to the eyes, this material causes severe eye damage.
Ingestion	May be toxic if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract. 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. Fluoride causes severe loss of calcium in the blood, with symptoms appearing several hours later, including painful and rigid muscle contractions of the limbs. Cardiovascular collapse can occur and may cause death with increased heart rate and other heart rhythm irregularities.
Chronic	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. Extended exposure to inorganic fluorides causes fluorosis, which includes signs of joint pain and stiffness, tooth discoloration, nausea and vomiting, loss of appetite, diarrhoea or constipation, weight loss, anaemia, weakness and general unwellness. There may also be frequent urination and thirst. Hydrogen fluoride easily penetrates the skin and causes destruction and corrosion of the bone and underlying tissue. Ingestion causes severe pains and burns in the mouth and throat, and blood calcium levels are dangerously reduced. Occupational exposures to strong inorganic acid mists of sulfuric acid: Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. WARNING: For inhalation exposure ONLY: HF has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS
Acute Toxicity	
Inhalation	Not classified as acutely toxic. A waiver is appropriate for this endpoint as the substance is corrosive and will result in rapid tissue deterioration.

Ingestion	Not classified as acutely toxic. A waiver is appropriate for this endpoint as the substance is corrosive, and oral exposure will result in rapid tissue destruction. It is noted that HF is classified in the EU as 'Very toxic if swallowed'.
Corrosion/Irritancy	A waiver is appropriate for this endpoint as the substance is corrosive, and dermal exposure will result in rapid tissue destruction at the site of contact.
Respiratory Sensitisation	Not expected to be a respiratory sensitiser.
Skin Sensitisation	Not expected to be a skin sensitiser.
Germ cell mutagenicity	Not considered to be a mutagenic hazard.
Reproductive Toxicity	Not considered to be toxic to reproduction.
STOT-single exposure	This material has been classified as a Category 3 Hazard. Exposure via inhalation may result in respiratory irritation.
STOT-repeated exposure	Not expected to cause toxicity to a specific target organ.
Aspiration Hazard	Not expected to be an aspiration hazard.

SECTION 12 – ECOLOGICAL INFORMATION

Eco-toxicity	Avoid contaminating waterways. Harmful to aquatic life due to low pH.
Persistence and degradability	Not available
Bio accumulative potential	Not available
Mobility in soil	Not available
Other adverse effects	Not available
Environmental Protection	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.

SECTION 14 – TRANSPORT INFORMATION

ADG	Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail".
Marine Pollutant	No
Land Transport (ADG)	
	
UN No:	3264
Dangerous Goods Class:	8
Packing Group:	II
Hazchem Code:	2X
Emergency Response Guide No:	154

Limited Quantities	1 L
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Segregation	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 alkalis are incompatible with concentrated strong acids. Note 2: Concentrated strong acids are incompatible with concentrated strong alkalis. Note 3: Acids are incompatible with Dangerous Goods of Class 6, which are cyanides. Exemptions may apply.
Marine Transport	
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea. This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.	
	
UN No:	3264
Dangerous Goods Class:	8
Packing Group:	II
Limited Quantities:	1 L
Proper Shipping Name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Air Transport	
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.	
	
UN No:	3264
Dangerous Goods Class:	8
Packing Group:	II
Limited Quantities:	0.5 L
Proper Shipping Name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

SECTION 15 – REGULATORY INFORMATION	
GHS Classification	Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.
SUSMP	S6 (Hydrofluoric Acid)
ADG Code	Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail".
AICS	All ingredients present on AICS

SECTION 16 – OTHER INFORMATION	
Issue Date	AUGUST 2025
Version Number	V3

Abbreviations and acronyms	**ADG Code**: Australian Code for the Transport of Dangerous Goods by Road and Rail. **AICS:** Australian Inventory of Chemical Substances. **CAS Number**: Chemical Abstracts Service Registry Number. **GHS**: Globally Harmonized System of Classification and Labelling of Chemicals **HAZCHEM:** An emergency action code of numbers and letters which gives information to emergency services. **HCIS**: Hazardous Chemical Information System **SWA**: Safe Work Australia. **SDS**: Safety Data Sheet **STEL**: Short Term Exposure Limit. **SUSMP**: Standard for the Uniform Scheduling of Medicines and Poisons. **TWA**: Time Weighted Average. **UN Number**: United Nations Number.
Literature references	Preparation of Safety Data Sheets for Hazardous Chemicals – Code of Practice (Safe Work Australia) GHS Hazardous Chemical Information List (Safe Work Australia) Guidance on the Classification of Hazardous Chemicals under the WHS Regulations. Global Harmonized System of Classification and Labelling of Chemicals (GHS) “Australian Exposure Standards”. Safe Work Australia Australian Code for The Transport of Dangerous Goods by Road and Rail Standard for the Uniform Scheduling of Medicines and Poisons
Disclaimer	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	