Chiefs Australia
Warana. Qld 4575
3/6 Textile Ave

ABN: 23 604 979 688

+61-7-5493 8868
office@chiefsaustralia.com

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

GHS IDENTIFIER	**BIOCLEAN K1 RTU / DUO WASH A BOOST PLUS**
PRODUCT (MATERIAL) NAME	
OTHER NAMES	
PROPER SHIPPING NAME	**CORROSIVE LIQUID, POISONOUS N. O. S.**
RECOMMENDED USE	Acidic cleaner for use on automotive and industrial machinery Dilute 1+50 with water.
SUPPLIER NAME/ADDRESS	Chiefs Australia 3/6 Textile Ave Warana Queensland 4575
TELEPHONE NO.	+61-(0) 7-5493 8868 Email – office@chiefsaustralia.com
EMERGENCY PHONE NUMBER	000 Hours: 0800-1700 Monday-Friday

SECTION 2 HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION OF	Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; **DANGEROUS GOODS**. **SUBSTANCE /MIXTURE**
	This material is hazardous according to Safe Work Australia; **HAZARDOUS SUBSTANCE.**
SUSMP SCHEDULE	**S6 POISON**
HAZARD CATEGORY	Acute Toxicity (Oral) - Category 5 Serious Eye Damage/Irritation - Category 2A Skin Corrosion/Irritation - Category 2
PICTOGRAMS	
SIGNAL WORD	**WARNING**
HAZARD STATEMENTS	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H312 Harmful in contact with skin H332 Harmful if inhaled H335 May cause respiratory irritation.
PRECAUTIONARY STATEMENTS	
GENERAL	P101 If medical advice is needed, have product container or label at hand P102 Keep out of reach of children P103 Read label before use
PREVENTION	P270 Do not eat, drink or smoke when using this product. P264 Wash exposed skin thoroughly after handling. P260 Do not breathe dusts or mists. P280 Wear protective gloves/eye protection/face protection. P234 Keep only in original container. P260 Do not breathe mist / vapours / spray. P264 Wash hands thoroughly after handling.
	P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves / protective clothing / eye protection / face 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. P321 Specific treatment (see First Aid Measures on Safety Data Sheet). P363 Wash contaminated clothing before re-use. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. 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 CENTER or doctor/physician. P390 Absorb spillage to prevent material damage.
STORAGE	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P406 Store in corrosive resistant container with a resistant inner liner.
DISPOSAL	P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

Chemical identity of ingredients	CAS Number(s) for ingredients	Proportion of ingredients	Hazard Codes
Sulphuric acid	7664-93-9	≥1% Conc <3%	H290; H314; H335
Ammonium Bifluoride	1341-49-7	≥1% Conc <3%	H302; H314
Alcohols, C12-14, ethoxylated	68439-50-9	≥1% Conc <3%	H302; H318: H315
If the sum of ingredients is less than 100%, the material consists of further ingredients determined not to be hazardous or below their cut-off limits as listed in HCIS.			

SECTION 4 FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Eye Contact:	SPEED IS ESSENTIAL 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.
Skin contact:	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.
Swallowed:	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 and as much as casualty can comfortably drink. Transport to hospital or doctor without delay.
Inhalation:	Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.
Medical attention or special treatment required	Contains <3% fluoride ion. Application of Calcium Gluconate gel can assist in treatment of burns.
Medical Conditions Aggravated by Exposure	Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance. Long term Effects: HEALTH EFFECTS Possible erosion of teeth, bronchial irritation.
ADVICE TO DOCTOR.	Treat symptomatically

SECTION 5 FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA	Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).
SPECIFIC HAZARDS FROM COMBUSTION PRODUCTS	Non-combustible material. but flammable and explosive hydrogen gas may be formed on contact with ferrous metals. If involved in a fire, highly toxic fumes will be evolved. If safe to do so remove containers from path of the fire. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of decomposition.
SPECIAL PROTECTIVE PRECAUTIONS AND EQUIPMENT protective FOR FIRE FIGHTERS	Decomposes on heating emitting toxic fumes, including those of ammonia , and hydrogen fluoride . Fire fighters to wear self-contained breathing apparatus and suitable clothing if risk of exposure to products of decomposition *Additional information*
	Classed as corrosive Class 8 under ADG Code.
Hazchem or Emergency Action Code:	2X

SECTION 6 ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES /ENVIRONMENTAL PRECAUTIONS: Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

PERSONAL PRECAUTIONS /PROTECTIVE EQUIPMENT /METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Carefully neutralise with soda ash , slaked lime or calcium carbonate. Collect and seal in properly labelled containers or drums for disposal. Wash area down with excess water.

SECTION 7 HANDLING AND STORAGE

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

PRECAUTIONS FOR SAFE HANDLING Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.Avoid skin and eye contact and breathing in vapour, mists and aerosols. Keep out of reach of children.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Store in a cool, dry, well ventilated place. Store in original packaging as approved by manufacturer. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS: None established for this mixture.
However Workplace Exposure Standard(s) for constituent(s):
Ammonium Bifluoride Inhalation LC_{50}(rat) 1276ppm/hr. Inhalation Lowest Lethal Concentration (human) 50ppm/30min.
Ammonium Bifluoride TLV(NH&MRC) for Fluorides as F : 2.5mg/m^3.

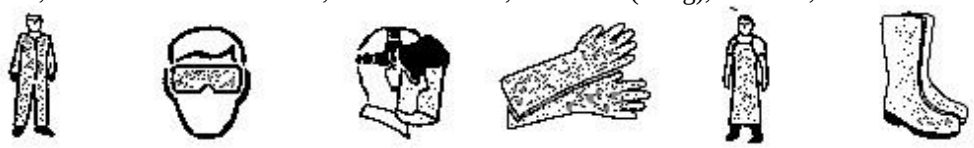
Material	TWA ppm	TWA (mg/m^3)	STEL ppm	STEL (mg/m_3)
Sulphuric acid		1		3
Ammonium Bifluoride				2.5
Phosphoric Acid		1		3

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

APPROPRIATE ENGINEERING CONTROLS: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use. If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT (PPE): The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.



Wear overalls, chemical goggles, face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet.
Wash contaminated clothing and other protective equipment before storage or re-use.
If determined by a risk assessment an inhalation risk exists, wear an acid mist respirator or an airsupplied respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Water white to straw foamy liquid
Flammability:	NA
Melting Point:	NA
Boiling Point:	100 □C
Flash Point:	NA
Vapour Pressure:	unknown
Volatiles:	86 +/- 1% Vapour Density unknown pH as supplies 0.5-1.5 Specific Gravity: 1.05
Solubility in water	soluble

SECTION 10 STABILITY AND REACTIVITY

Chemical Reactivity	Reacts with alkalis.
Chemical stability	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions:	Corrosive to most metals, glass and other siliceous materials.
Conditions to avoid	Do not mix with strong alkalis (Class 8) , or oxidising agents (Class 5) Incompatible materials Incompatible with acids , alkalis , glass and metals.
Hazardous decomposition products	Upon combustion oxides of carbon (CO, CO_X), Fluorine compounds (HF) or flammable hydrogen gas (H_2) may be present.

SECTION 11 TOXICOLOGICAL INFORMATION

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:

SYMPTOMS OF EXPOSURE

Swallowed: Can result in nausea, vomiting, abdominal pain, diarrhoea, and in some cases, difficulty in breathing.

Eye:	Corrosive. May result in permanent injury.
Skin:	Contact will result in slight to moderate irritation. Can be adsorbed through the skin, with potentially toxic effects.
Inhalation:	Inhalation of mists and aerosols can result in respiratory irritation and harmful effects associated with the corrosive nature of the material.

ACUTE TOXICITY Oral LD_{50} ATE $_{mix}$ = >2500mg/kg

Sulphuric acid Oral/rat LD_{50} = 2140mg/kg

Ammonium Bifluoride LD_{50}/LC_{50}: Oral/rat LD_{50} = 130mg/kg

The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Acute toxicity:	Not expected to be toxic Oral LD_{50} ATE $_{mix}$ => 2500mg/kg
Skin corrosion/irritation:	Expected to be a severe irritant (Cat 1).
Serious eye damage/irritation:	Expected to be a severe irritant (Cat 1).
Respiratory or skin sensitisation:	Not expected to be a sensitiser.
Germ cell mutagenicity:	Not expected to be mutagenic.
Carcinogenicity:	Not classed as a carcinogen by NOHSC, however evidence available indicates that sulfuric acid mists are carcinogenic to humans. Chronic exposure to mists containing sulphuric acid is a cancer hazard.
Ammonium Bifluoride	ACGIH: A4 Not classifiable as a Human carcinogen (as F) (listed as '**undefined**IARC: Group 3 carcinogen (listed as '**undefined**'.
Reproductive toxicity:	Not expected to impair fertility.
Specific Target Organ Toxicity (STOT) – single exposure:	Single exposure
Specific Target Organ Toxicity (STOT) – repeated exposure:	Chronic Resiratory: Possible erosion of teeth, bronchial irritation. May cause fluorosis with skeletal abnormalities. May cause digestive tract disturbances.
Aspiration hazard:	Not expected to be a hazard.

Additional information
Aggravated medical conditions caused by exposure

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY	Avoid contaminating waterways. Sulfuric acid is harmful to aquatic life in very low concentrations.
PERSISTENCE AND DEGRADABILITY	The mineral acid components will persist until it reacted with an alkaline substrate in The environment or neutralized with the high pH Part B product. The remainder of the ingredients are biodegradable.
MOBILITY	Sulfuric acid is miscible with water and its dilution will increase the velocity of downward movement in the soil where it may dissolve the soil material.
ENVIRONMENTAL FATE (EXPOSURE)	Do NOT allow product to enter waterways, drains or sewers. May cause corrosion and deterioration of many common materials found in the environment.
BIOACCUMULATIVE POTENTIAL	Log Pow -2.20 (Estimated value)
ENVIRONMENTAL IMPACT	No Data Available
ADDITIONAL INFORMATION	Ammonium Bifluoride component: Fish toxicity: LC_{50} Zebra-fish: 137m/l/96h Bacteria toxicity: EC_{50} activated sludge: 2394mg/l

Acute toxicity:

Fish –	Data not available
Aquatic invertebrate –	Data not available
Algae –	Data not available
Microorganisms –	Data not available

Chronic toxicity:

Fish –	Data not available
Aquatic invertebrate –	Data not available

	Algae –	Data not available

Microorganisms – Data not available

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS AND CONTAINERS	Refer to State Land Waste Management Authority. Empty containers must be decontaminated. Normally suitable for disposal at approved land waste site.
SPECIAL PRECAUTIONS FOR LANDFILL OR INCINERATION	

SECTION 14 TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

UN NUMBER	2922
UN PROPER SHIPPING NAME	**CORROSIVE LIQUID, POISONOUS N. O. S.**
CLASS	8
SUBSIDIARY CLASS	6
PACKING GROUP	II
SPECIAL PRECAUTIONS FOR USER	
IERG	37
HAZCHEM CODE	2XE

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN NUMBER			2922
UN PROPER SHIPPING NAME			**CORROSIVE LIQUID, POISONOUS N. O. S.**
CLASS			8
SUBSIDIARY CLASS	6	PACKING GROUP	II
IMDG EMS Fire:			F-A
IMDG EMS Spill:			S-B

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN NUMBER	2922
UN PROPER SHIPPING NAME	**CORROSIVE LIQUID, POISONOUS N. O. S.**
CLASS	8
SUBSIDIARY CLASS	6
PACKING GROUP	II

SECTION 15 REGULATORY INFORMATION

CLASSIFICATION:	This material is hazardous according to Safe Work Australia; **HAZARDOUS SUBSTANCE.**
CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:	Acute Toxicity (Oral) - Category 4 Serious Eye Damage/Irritation - Category 1 Skin Corrosion/Irritation - Category 1 Specific target organ toxicity (single exposure) - Category 3
HAZARD STATEMENT(S):	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H312 Harmful in contact with skin H332 Harmful if inhaled H335 May cause respiratory irritation
POISONS SCHEDULE (SUSMP):	**S6 POISON**

AICS All ingredients are on the Australian Inventory of Chemical Substances *Additional information*
Additional national and/or international regulatory information.

SECTION 16 OTHER INFORMATION

CONTACT PERSON/POINT	FOR EMERGENCIES ONLY CONTACT : Australia : 000
	POISONS INFORMATION CENTRE : Australia 131126
	: New Zealand 0800 764 766
Date of preparation or last revision of the SDS	10 Feburary 2018

Prepared by Michael Scuderi BE(Chem) *Additional information*
Key/legend to abbreviations and acronyms used in the SDS.

ADG	Australian Code for the Transport of Dangerous Goods by Road and Rail
ACGIH	American Conference of Governmental Industrial Hygienists
ASCC	Australian Safety and Compensation Council
ATE	Acute Toxicity Estimates
BEI®	Biological exposure indices (BEI) are values used for guidance to assess biological monitoring results. With respect to chemical exposure, biological monitoring is the measurement of the concentration of a chemical marker in a human biological media that indicates exposure. They are not developed for use as legal standards.
Carcinogen Category Number	1. Established human carcinogen 2. Probably human carcinogen 3. Substances suspected of having carcinogenic potential
Code AICS	Australian Inventory of Chemical Substances
CAS number	Chemical Abstracts Service Registry Number
EPG	Emergency Procedure Guide (superseded by IERG)
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
HCIS	The Hazardous Chemical Information System (HCIS) is a database of information on chemicals that have been classified in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). HCIS replaces the previous Hazardous Substance Information System (HSIS).
HSIS	HSIS is a database of information on substances classified in accordance with Australia's previous hazardous substance classification system, the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)].
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IERG	HB 76-2004 Dangerous goods - Initial Emergency Response Guide
IMDG	International Maritime Dangerous Goods. A uniform code for transport of dangerous goods at sea.
LEL	lower flammable (explosive) limits in air;
LD_{50}	Lethal Dose sufficient to kill 50% of test population
NIOSH	National Institute for Occupational Safety and Health The United States federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness.
NOAEL	No Observed Adverse Effect Level
NOEL	No Observable Effect Level
NOHSC	National Occupational Health and Safety Commission
NTP	National Toxicology Program (USA)
PEL	Permissible Exposure Limit
RTECS	Registry of Toxic Effects of Chemical Substances (Symyx Technologies')
TCL_O	Toxic Concentration Low
TD_{LO}	Toxic Dose Low : lowest dosage per unit of bodyweight (typically stated in milligrams per kilogram) of a substance known to have produced signs of toxicity in a particular animal species.
TLV	Threshold Limit Value (ACGIH):The time weighted average used to describe exposure which is harmless to most of the population when exposed 8 hours per day, 40 hours per week.
TWA	(Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
SAFEWORK	Independent statutory agency with primary responsibility to improve occupational health and safety and workers' compensation arrangements across Australia.
STEL	(Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UEL	upper flammable (explosive) limits in air;
UN Number	United Nations Number
VOC	Volatile Organic Content - defined as : 'any chemical compound based on carbon chains or rings with a vapour

pressure greater than 0.1mm of mercury (Hg) or 0.0135Kpa at 25ºC. This definition excludes reactive diluents, which are designed to be chemically bound into the cured film. It also includes all constituents >0.5% by volume of formulation, which are organic compounds with a boiling point < 250ºC.'

Literature references.

Sources for data. Safety Data Sheets from Suppliers
Hazardous Chemical Information System (HCIS) - ASCC Australia (on-line)
GHS (Globally Harmonised System of Substance Classification & Labelling)
REACH (European Chemical Substance Information System)
ADG Code 7th Edition
SUSMP Nº 13

DISCLAIMER:

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since CHEMISTRY HOUSE Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact CHEMISTRY HOUSE Pty Ltd at the contact details on page 1. CHEMISTRY HOUSE Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request. CHEMISTRY HOUSE Pty Ltd however makes no warranty whatsoever, expressed, implied or of merchantability regarding the accuracy of such data or the results to be obtained from the use thereof and assumes no responsibility for injury to buyer or third persons or for any damage to property, Buyer assumes all risks.