SAFETY DATA SHEET

RUST REMOVER

CLEANING SYSTEMS LIMITED

Catalogue number: **FT492**
Version No: **1.5**
Issue date: **12/01/2017**
Safety Data Sheet according to WHS ADG and HSNO requirements

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	**RUST REMOVER**
Synonyms	FT492
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains ammonium bifluoride)
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	High performance rust spot remover

Details of the manufacturer/importer

Registered company name	CLEANING SYSTEMS LIMITED
Address	659 Great South Road, Penrose, Auckland 1061 NEW ZEALAND
Telephone	+64 9579 4114
Fax	+64 9579 4115
Website	www.cleaningsystems.co.nz
Email	rachel@cleaningsystems.co.nz

Emergency telephone number

Association / Organisation	National Poisons Information Centre
Emergency telephone numbers	0800 764 766
Other emergency telephone numbers	Emergency Services 111

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the Model WHS Regulations and the ADG Code.

HSNO Classification	6.3A , 6.4A, 6.1E (All), 6.1E (O), 8.1A , 8.2C , 8.3A , 9.1D (All) **HSNO Approval** HSR005996, 001571, 004487
GHS Classification [1]	Serious Eye Damage Category 1, Skin Corrosion/Irritation Category 1B, Acute Toxicity (Oral) Category 4, Metal Corrosion Category 1, STOT - SE (Resp. Irr.) Category 3
Legend:	*1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

Label elements

GHS label elements	
SIGNAL WORD	**DANGER**

Hazard statement(s)

H318	Causes serious eye damage
H314	Causes severe skin burns and eye damage
H302	Harmful if swallowed
H290	May be corrosive to metals
H335	May cause respiratory irritation

Precautionary statement(s) Prevention

P260	Do not breathe fumes / vapours / spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P234	Keep only in original container.
P270	Do not eat, drink or smoke when using this product.

Precautionary statement(s) Response

P301+P310+P330+P331	IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.
P303+P310+P363+P361+P353	IF ON SKIN (or hair): Immediately call a POISON CENTER or doctor. Take off immediately all contaminated clothing and wash before reuse. Rinse skin with water/shower.
P305+P310+P351+P338	IF IN EYES: Immediately call a POISON CENTER or doctor. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P310+P340	IF INHALED: Immediately call a POISON CENTER or doctor. Remove person to fresh air and keep in a position comfortable for breathing.
P390	Absorb spillage to prevent material damage.

Precautionary statement(s) Storage

P403+P405+P233	Store locked up, in a well-ventilated place. Keep container tightly closed.

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
1341-49-7	<10	ammonium bifluoride
7664-38-2	<10	phosphoric acid
79-14-1	<10	hydroxyacetic acid

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

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: Obtain medical advice / attention without delay. 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. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. If instructed to do so, transport to hospital or doctor without delay.
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 or doctor. 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.
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.
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 and as much as casualty can comfortably drink. Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Following acute or short term repeated exposure to hydrofluoric acid:
Subcutaneous injections of Calcium Gluconate may be necessary around the burnt area especially under fingernails. 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.
Eye contact pain may be excruciating and 2-3 drops of 0.05% pentocaine hydrochloride may be instilled, followed by further irrigation.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

	Water spray or fog. Foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire incompatibility	None known

Advice for firefighters

Fire Fighting	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. Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	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 containers. May emit corrosive, poisonous fumes. May emit acrid smoke.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	Check regularly for spills and leaks. Clean up all spills immediately. 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. Wipe up. Place in a suitable, labelled container for waste disposal.
Major Spills	Clear area of personnel and move upwind. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Absorb on sand, dirt, vermiculite or similar absorbent material. Place into labelled drums and dispose of according to local government regulations. Immediately notify emergency services (Police or Fire Brigade) if the spill is too large for you to safely and effectively handle.

	Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	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 contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling.
Other information	Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container	Keep only in original container.
Storage incompatibility	Avoid storage and contact with all alkalis. Corrosive to all metals.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	ammonium bifluoride	Fluorides (as F)	2.5 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	phosphoric acid	Phosphoric acid	1 mg/m3	3 mg/m3	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
ammonium bifluoride	Ammonium hydrogen fluoride; (Ammonium bifluoride)	11 mg/m3	130 mg/m3	750 mg/m3
phosphoric acid	Phosphoric acid	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
ammonium bifluoride	500 mg/m3	250 mg/m3
phosphoric acid	10,000 mg/m3	1,000 mg/m3
hydroxyacetic acid	Not Available	Not Available

Exposure controls

Appropriate engineering controls	Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate. If ventilation is poor, then the use of a local exhaust ventilation system is recommended.
Personal protection	
Eye and face protection	Safety glasses with unperforated side shields, OR Chemical goggles. Whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. Lens should be removed at the first signs of eye redness or irritation. Lens should be removed in a clean environment only after workers have washed hands thoroughly.
Skin protection	See Hand protection below
Hands/feet protection	Elbow length Neoprene gloves When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.
Body protection	See Other protection below
Other protection	Overalls. PVC Apron. Eyewash unit. Ensure there is ready access to a safety shower.
Thermal hazards	Not Available

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Opaque, colourless gel

Physical state	Gel	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Molecular weight (g/mol)**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Applicable
pH (as supplied)	3.2	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Partition coefficient n-octanol / water**	Not Available
Flash point (°C)	Not Applicable	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not flammable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Applicable	**Viscosity (cSt)**	Not Available
Lower Explosive Limit (%)	Not Applicable	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water (g/L)	Miscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Contact with alkaline material liberates heat Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness. Acute effects of fluoride inhalation include irritation of nose and throat, coughing and chest discomfort. A single acute over-exposure may even cause nose bleed.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. 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.
Skin Contact	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. Skin contact is not thought to produce harmful health effects (as classified under EC Directives using animal models). Systemic harm, however, has been identified following exposure of animals by at least one other route and the material may still produce health damage following entry through wounds, lesions or abrasions. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, 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	If applied to the eyes, this material causes severe eye damage. 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.
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. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Not considered to be ecotoxic.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
phosphoric acid	HIGH	HIGH
hydroxyacetic acid	LOW	LOW

Bio accumulative potential

Ingredient	Bioaccumulation
phosphoric acid	LOW (LogKOW = -0.7699)
hydroxyacetic acid	LOW (LogKOW = -1.11)

Mobility in soil

Ingredient	Mobility
phosphoric acid	HIGH (KOC = 1)
hydroxyacetic acid	HIGH (KOC = 1)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / packaging disposal	Recycle containers whenever possible. Product residues and containers should be disposed of in accordance with local government regulations

SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	NO
HAZCHEM	2X

Land transport (ADG)

UN number	3264
Packing group	II
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains ammonium bifluoride)
Environmental hazard	No relevant data
Transport hazard class)	Class: 8 Sub risk: 6.1
Special precautions for user	Special provisions: 274 Limited quantity: 1 L

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or m i x t u r e

AMMONIUM BIFLUORIDE (1341-49-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Inventory of Chemical Substances (AICS)
Australia Hazardous Substances Information System - Consolidated Lists
International Agency for Research on Cancer (IARC) - Agents Classified by the IARCMonographs

PHOSPHORIC ACID (7664-38-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Inventory of Chemical Substances (AICS)
Australia Hazardous Substances Information System - Consolidated Lists

SODIUM LAURYL SULFATE (151-21-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists
Australia Inventory of Chemical Substances (AICS)

SECTION 16 OTHER INFORMATION

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at: www.chemwatch.net

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA;	Permissible Concentration-Time Weighted Average
PC-STEL:	Permissible Concentration-Short Term Exposure Limit
IARC:	International Agency for Research on Cancer
ACGIH:	American Conference of Government Industrial Hygienists
STEL:	Short Term Exposure Limit
TEEL:	Temporary Emergency Exposure Limit
IDLH:	Immediate Danger to Life or Health Concentrations
OSF:	Odour Safety Factor
NOAEL:	No Observed Effects Level
TLV:	Threshold Limit Value
LOD:	Limit Of Detection
OTV:	Odour Threshold Value
BCF:	Bio Concentration Factors
BEI:	Biological Exposure Index

End of SDS