P.O. Box 15018
Hastings, New Zealand

MATERIAL SAFETY DATA SHEET

IN CASE OF SPILL CALL

(06) 879-9438

RUST REMOVER III

Section I - Product Identification

Product Name: **Rust Remover III**
Product Number: **C193**
CAS Number: **Blend**

Section II – Composition / Information on Ingredients

Chemical Name	Amount	CAS Number
Ammonium Bifluoride	60.0 – 100.0 %	1341-49-7
(See Section 8 for exposure guidelines)	(See Section 15 for regulatory information)	

Section III – Hazards Identification

EMERGENCY OVERVIEW: DANGER May be fatal if inhaled or swallowed. May be harmful if absorbed through skin.
HMIS Rating: Health: 2 **Flammability: 0** **Reactivity: 0**
NFPA Rating: Health: 3 **Flammability: 0** **Reactivity: 0** **Special Hazard: Corrosive**
POTENTIAL HEALTH EFFECTS
Eye: Causes eye irritation. May be extremely irritating with possible burns to eye tissue and permanent eye damage may result.
Skin: Causes irritation and burns to the skin. Effects may not appear immediately..
Inhalation: May cause irritation and burns to the respiratory tract. May be absorbed through inhalation of dust. Irritation and burning effects may not appear immediately.
Ingestion: May cause brain and kidney damage. Affects heart and circulatory system. Death may be caused by respiratory paralysis. Lethal dose between 1 teaspoonful and 1 oz.
Chronic Effects: Chronic exposure may cause mottling of teeth and bone damage (osteosclerosis) and fluorosis.
Medical Conditions Aggravated by Exposure: Populations that appear to be at increased risk from the effects of fluoride are individuals that suffer from diabetes insipidus or some forms or renal impairment.
Miscellaneous: If inhaled or swallowed, this compound can cause fluoride poisoning. Early symptoms include nausea, vomiting, diarrhea, and weakness. Later effects include central nervous system effects, cardiovascular effects and death.

Section IV – First Aid Measures

Eye Contact First Aid: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.
Skin Contact First Aid: Immediately wash skin with soap and plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. **CALL A PHYSICIAN IMMEDIATELY**.
Inhalation First Aid: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. **CALL A PHYSICIAN IMMEDIATELY.**
Ingestion First Aid: Give large quantities of milk or water with milk of magnesia to dilute. Never give anything by mouth to an unconscious person. Do not induce vomiting. **CALL A PHYSICIAN IMMEDIATELY.**
Notes To Physician: For large exposures, systemic effects (hypocalcemia and hypomagnesia) may occur.

Section V – Fire Fighting Measures

Flammable Properties: COC Flash Point: N/A Autoignition Temperature: N/A
Flammable Limits in Air: LEL: % UEL: %
Extinguishing Media: Use dry chemicals ot fight fire. Do not use water.
Fire & Explosion Hazards: Contact with water and metal at the same time may evolove flammable hydrogen gas.

Section VI – Accidental Release Measures

Safeguards (Personnel): Ventilate spill area. Protect skin and eyes from exposure. Wear appropriate personal protective equipement.
Initial Containment: Ventilate area. Take up and place in secure closed containers.

Section VII – Handling and Storage

Handling (Personnel): Do not breath (dust, vapor, mist, gas). Avoid contact with skin and eyes. Do not handle in a manner that creates excessive dust. Use with adequate ventilation.
Handling (Physical Aspects): Secure container after each use.
Storage Precautions: Keep container tightly closed.
Miscellaneous: Separate from acids and alkalis. Do not store in metal containers, as contact with moisture and metal at the same time may release flammable hydrogen gas. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

Section VIII – Exposure Controls / Personal Protection

Eye / Face Protection Requirements: Chemical goggles and/or face shield are recommended to avoid contact with eyes.
Skin Protection Requirements: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate to prevent skin contact.
Exposure Guidelines: **Ammonium bifluoride –** OSHA PEL: 2.5 mg/m^3
OSHA TWA: 2.5 mg/m^3

Section IX – Physical and Chemical Properties

Form: Solid **Color**: White **Odor**: No Odor
Boiling Point: 240 C **Vapor Pressure**: N/A psia
Vapor Density: N/A (Air = 1) **Solubility in Water**: 41.5g/100g Water @ 25C (68F) 0
Specific Gravity: 1.51 (Water = 1)
Melting/Freezing Point: 124.6 C **pH**: 3.5 (5% solution)
% Volatiles: 0%

Section X – Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.
Polymerization: Will not occur.
Incompatibility With Other Materials: Reacts with acids to liberate hydrogen fluoride and base to liberate ammonia. When combined with moisture, will corrode glass, cement and most metals.
Decomposition: Emits toxic fumes of hydrogen fluoride, nitric oxides, and ammonia when heated to decomposition. Upon contact with moisture and metal, this material may release hydrogen gas.

Section XI – Toxicological Information

Ammonium bifluoride

Test Code: Oral LD50	Species: Rat	Results: 129 mg/kg
Test Code: Inhalation LC50	Species: Rat	Results: 2300 mg/m3/2H

Section XII – Ecological Information

Environmental Fate: This material is not expected to significantly bioaccumulate. When released into water, this material may biodegrade to a moderate extent.

Ammonium bifluoride

Test Code: Acute Aquatic Toxicity (96 hr.) Species: Fish Results: >100 mg/L

Section XIII – Disposal Considerations

Waste Disposal: Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility.

Section XIV – Transportation Information

Product Label: Rust Remover III
M.O.T. Shipping Name: Ammonium hydrogendifluoride, Solid
M.O.T. Hazard Class: 8
UN Number: UN1727
M.O.T. Label: Corrosive
Package Class: II
Miscellaneous: IATA Shipping Classification: Same as MOT
IMO / IMDG Shipping Classification: Same as MOT with the following changes:
Code Page Number: 8112 EmS Number: 8-06 MFAG Table No.: 750

Section XV – Regulatory Information

Regulatory Lists Searched:

01=SARA Title III Section 302	02=SARA Title Section 313
03=RCRA Hazardous Waste Codes	04=CERCLA Hazardous Substances
05=Clean Air Act	06=California Prop. 65
07=Florida Right-to-Know	08=Massachusetts Right-to-Know
09=Pennsylvania Right-to-Know	10=Pennsylvania Right-to-Know

EEC Symbols and Indications of Danger: Corrosive (C)

R-Phrases: R34 – Causes burns.
R36/37/38 – Irritating to eyes, respiratory system, and skin.

S-Phrases:
S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S3/7/9 – Keep container tightly closed in a cool, well-ventilated place.
S36/37/39 – Wear suitable protective clothing, gloves, and eye/face protection.

WHMIS Hazard Symbols: Class E – Corrosive Material

CERCLA Hazardous Substances
Ammonium bifluoride (1341-49-7) - - RQ 100 lb

Miscellaneous Information: This material or all of its components are listed on the Inventory of Existing Chemical Substances under the Toxic Substance Control Act (TSCA).

RUST REMOVER III

Section XVI – Other Information

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Approved by: Edward Durrant
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END OF MSDS

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