

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Adco Rust & Stain Remover™

OTHER MEANS OF DETECTION: Not applicable.

GENERAL USE: For professional drycleaning, wetcleaning, and laundry use only.

PRODUCT DESCRIPTION: Rust Stain Remover

DISTRIBUTOR

Adco Professional Products LLC
1706 Ledo Rd.
Albany, GA 31707

Product Information: 800-821-7556 (USA
& Canada only)

24 HR. EMERGENCY TELEPHONE NUMBERS

Medical Emergency: 866-303-6947 (USA & Canada only) or 651-632-9272

Transportation Emergency: 800-424-9300 (USA & Canada only) or 703-527-3887

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Acute Toxicity – Oral: Category 4

Acute Toxicity – Dermal Category 3

Eye Damage/Irritation: Category 1

Skin Corrosion/Irritation: Category 1B

GHS LABEL ELEMENTS

Symbol(s):



Signal Word: Danger

Hazard Statements:

H302 – Harmful if swallowed

H311 – Toxic in contact with skin

H314 – Causes severe skin burns and eye damage

H333 – May be harmful if inhaled

Precautionary Statements:

P260 – Do not breathe dust/fume/gas/mist/vapors/spray.

P264 – Wash skin thoroughly after handling.

P270 – Do not eat, drink or smoke when using this product.

P271 – Use only outdoors or in a well-ventilated area.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331+310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303+P361+P353+310+P363 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

P304+340+310 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338+ P310 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

P321 – Specific treatment–See First Aid section of Safety Data Sheet.

P501 – Dispose of contents and container to licensed, permitted incinerator, or other thermal destruction device.

Other Hazards: Not available.

Unknown Acute Toxicity: Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>
Hydrofluoric acid	1 - 2.3	7664-39-3

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

4. FIRST AID MEASURES

Hydrofluoric is hazardous, even at low concentration. Medical treatment is recommended for all incidents of contact or exposure.

EYES: Immediately flush eye with water for at least 15 minutes while lifting the upper and lower lids. Remove contact lenses if present and easy to do after the first 5 minutes then continue flushing. Get immediate medical attention.

SKIN: Immediately wash with large amounts of water for at least 15 minutes. Get immediate medical attention. Remove contaminated clothing and wash it before reuse. Consult a physician if irritation persists.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician. If conscious, rinse mouth with water then give milk, chewable calcium carbonate tablets or milk of magnesia.

INHALATION: Immediately remove affected person to fresh air. If not breathing, give artificial respiration. Mouth to mouth is not recommended. If breathing is difficult have qualified personnel administer oxygen. Get immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Contact may cause severe irritation or burns with redness, pain and swelling.

SKIN: Contact may cause severe irritation or burns to the skin. Burns may not be immediately painful or visible.

SKIN ABSORPTION: Burns may not be immediately painful or visible. Can be absorbed through the skin in toxic amounts.

INGESTION: Swallowing may cause gastrointestinal irritation or burns, nausea, vomiting and abdominal pain. May cause fluoride poisoning with symptoms including weakness, tremors, shallow breathing, spasms of the hands and feet, convulsions and coma.

INHALATION: Inhalation may cause respiratory irritation or burns with coughing or labored breathing. Symptoms may be delayed. Mist and vapors may cause respiratory irritation or burns with coughing and labored breathing.

ADDITIONAL INFORMATION: After emergency actions, call the emergency medical information number on page 1 or a physician immediately. Prolonged or repeated exposure may

cause mottling of teeth, damage to bones and fluorosis with symptoms including brittle bones, weight loss, anemia, calcified ligaments and joint stiffness.

NOTES TO PHYSICIAN: Contact your Poison Center for the latest advice on treatment. For eye contact: Carefully evaluate for eye damage, exposure to dilute solutions may result in delayed symptoms of ocular damage. For skin contact: Decontamination of the contact area is of primary importance. Symptoms may be delayed for several hours. Specific treatment is controversial with no single treatment clearly superior. Topical calcium gluconate gel or magnesium oxide paste has been successful. Calcium gluconate infiltration may be considered in some cases. Systemic absorption may occur and may require treatment with parenteral calcium salts. For ingestion: Administer fluoride binding substance. Monitor and treat hypocalcemia and hypomagnesemia as needed. Observe and evaluate patient for oral and GI burns. For inhalation: Monitor for respiratory distress. Respiratory symptoms may be delayed up to 24 hours.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Not applicable.

EXTINGUISHING MEDIA: This material is not combustible. Use any media that is suitable for the surrounding fire.

HAZARDOUS COMBUSTION PRODUCTS: Contact with certain metals may evolve flammable hydrogen gas. Emits toxic fumes under fire conditions.

FIRE FIGHTING EQUIPMENT: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus. Cool fire exposure containers with water.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Wear appropriate protective clothing and equipment to prevent eye and skin contact. Ventilate the area. Only trained individuals should attempt to clean up spills. If possible, carefully neutralize with soda ash or lime. Collect into appropriate containers for disposal with an inert absorbent. Wash spill area with solution of soda ash. Do not use metal or glass containers.

LARGE SPILL: Wear appropriate protective clothing and equipment to prevent eye and skin contact. Ventilate the area. Only trained individuals should attempt to clean up spills. Evacuate spill area. Dike spill and prevent spill from entering sewers and waterways. If possible, carefully neutralize with soda ash or lime. Collect into appropriate containers for disposal with an inert absorbent. Wash spill area with solution of soda ash. Do not use metal or glass containers. Do not flush to sewer. Report spill as required by local and federal regulations.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Not applicable.

HANDLING: Prevent eye and skin contact. Do not breathe vapors or mists. Use only with adequate ventilation and appropriate protective clothing. Immediately remove contaminated clothing and other items. Wash thoroughly after handling. Follow all SDS/label precautions even after container is emptied because it may retain product residues.

STORAGE: Protect containers from physical damage. Store in a cool, well-ventilated area. Keep in original containers.

ELECTROSTATIC ACCUMULATION HAZARD: Not applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

	EXPOSURE LIMITS					
	OSHA PEL		ACGIH TLV		Supplier OEL	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Hydrofluoric Acid (as hydrogen fluoride)	TWA	3		0.5 ^[2]		
	STEL	NE ^[1]		C 2		

TABLE FOOTNOTES

1. NE=Not established.
2. .Skin notation.

The specific identities of one or more components of this product are withheld as a trade secret.

ENGINEERING CONTROLS: Use in a well-ventilated area. For operations where exposures limits are exceeded increased mechanical ventilation such as local exhaust may be required.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear chemical safety goggles and faceshield to prevent eye and face contact.

SKIN: PVC, neoprene or other impervious gloves are recommended to prevent skin contact.

RESPIRATORY: None required for normal use. For large jobs where the recommended exposure limit may be exceeded an approved respirator may be required. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.

PROTECTIVE CLOTHING: Impervious apron, boots and other clothing are recommended if needed to prevent contact or if splashing is possible. A safety shower and an eye wash facility should be available in the immediate work area.

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Do not eat or drink in work area.

OTHER USE PRECAUTIONS: Do not wear contact lenses without eye protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless liquid

PHYSICAL STATE: Liquid.

COLOR: Colorless.

ODOR: Sharp acrid odor.

ODOR THRESHOLD: 0.5-3 ppm (hydrogen fluoride).

pH: <1

FREEZING POINT: No data available.

INITIAL BOILING POINT: 100°C (212°F)

FLASHPOINT: Not flammable

EVAPORATION RATE: No data available.

FLAMMABILITY (Solid, Gas): Not applicable, this product is a liquid at room temperature.

FLAMMABLE LIMITS: Not applicable.

VAPOR PRESSURE: No data available.

VAPOR DENSITY: No data available.

RELATIVE DENSITY: ~1.0

SOLUBILITY IN WATER: Complete in water.

PARTITION COEFFICIENT (Log K_{ow}): No data available.

AUTO-IGNITION TEMPERATURE: Not applicable.

DECOMPOSITION TEMPERATURE: No data available.

VISCOSITY: No data available

PERCENT VOLATILE: Not available.

10. STABILITY AND REACTIVITY

REACTIVITY: Not reactive under normal conditions of use.

CHEMICAL STABILITY: Stable.

POSSIBILITY OF HAZARDOUS REACTIONS: Reacts with metals to generate flammable hydrogen gas. Reacts with bases generating heat.

CONDITIONS TO AVOID: High heat.

INCOMPATIBLE MATERIALS: Avoid alkalis and metals. Reactive with many other chemicals. Never mix with other chemicals or cleaning agents..

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield toxic fluoride fumes. Reacts with metals to generate flammable hydrogen gas. Reacts with silica to produce silicon tetrafluoride, a hazardous, colorless gas.

11. TOXICOLOGICAL INFORMATION

ROUTES OF ENTRY: Skin, eyes, inhalation

ACUTE TOXICITY (ATE)

DERMAL LD₅₀: 217 mg/kg (hydrofluoric acid point estimate for category 1 – 5 mg/kg)

ORAL LD₅₀: 1351 mg/kg (mixture) (hydrofluoric acid: oral rat LD50: 31 mg/kg, [read across from sodium fluoride]; denatonium benzoate: oral rat LD50 584 mg/kg)

INHALATION LC₅₀: 27,777 ppm as gas or 22.8 mg/L as vapor. (hydrofluoric acid: inhalation LC 50: 1276 ppm/1 hr)

CHRONIC TOXICITY

TARGET ORGANS: No data available.

SENSITIZATION: None of the components are sensitizing to animals or humans.

CARCINOGENICITY

IARC: Not listed as a carcinogen.

NTP: Not listed as a carcinogen.

OSHA: Not listed as a carcinogen.

OTHER: ACGIH: Not listed as a carcinogen.

OTHER: Prolonged or repeated exposure may cause mottling of teeth. Damage to bones and fluorosis with symptoms including brittle bones, weight loss, anemia, calcified ligaments and joint stiffness.

REPRODUCTIVE EFFECTS: None of the components of the components have been shown to cause reproductive effects or developmental toxicity.

MUTAGENICITY: None of the components of the components have been shown to cause germ cell mutagenicity.

SYNERGISTIC MATERIALS: None known.

POTENTIAL HEALTH EFFECTS

EYES: Causes severe burns to the eyes. Permanent damage and blindness may occur. Burns may not be immediately painful or visible.

SKIN: Causes burns to the skin.

SKIN ABSORPTION: May be fatal by widespread skin contact. May be absorbed through the skin resulting in potentially fatal hypocalcemia.

INGESTION: May be fatal if swallowed or by widespread skin contact. May cause central nervous system, kidney and cardiovascular (heart rhythm) effects. Respiratory paralysis may cause death. Swallowing large amounts may cause potentially fatal hypocalcemia and hypomagnesia.

ASPIRATION HAZARD: There is insufficient data available to classify this product as an aspiration hazard.

INHALATION: May cause fluoride poisoning with effects similar to those listed under "ingestion". Symptoms may be delayed. May be fatal if inhaled in large amounts

MEDICAL CONDITIONS AGGRAVATED: Eye, skin, and respiratory conditions.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: This product may be harmful to aquatic organisms due to change in pH of water where released. Hydrofluoric acid: LC50 fish 41-340 mg/U96 hr, NOEC fish 4 mg/U21 d.; EC50 daphnia magna 97-270 mg/1/48 hr, NOEC 3.7 mg/U21 d.; EbC50 algae 43-122 mg/U96 hr.

PERSISTENCE AND DEGRADABILITY: Biodegradation is not applicable to inorganic substances such as hydrofluoric acid..

BIOACCUMULATIVE POTENTIAL: Hydrofluoric acid is not bioaccumulative based on BCF of <55 in various organisms.

MOBILITY IN SOIL: If the pH is > 6.5 soil can bind fluorides tightly. High calcium content will immobilize fluorides, which can be damaging to plants when present in acid soils.

OTHER ADVERSE EFFECTS: No data available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with all local, regional, national, provincial, territorial and international regulations

EMPTY CONTAINER: Container remains hazardous when empty if not thoroughly rinsed. Continue to observe all precautions.

RCRA/EPA WASTE INFORMATION: EPA Hazardous Waste Code: U134; Hydrofluoric acid (C,T).

14. TRANSPORTATION INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Hydrofluoric acid solution

TECHNICAL NAME: Hydrofluoric acid solution

PRIMARY HAZARD CLASS/DIVISION: 8 (6.1)

UN/NA NUMBER: UN1790

PACKING GROUP: II

LABEL Corrosive and Poison

OTHER SHIPPING INFORMATION: This product may be shipped as a Limited Quantity in inner packages of 1 L and package limit of 30 kg when shipped by ground.

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable - product is transported only in packaged form.

CANADA TRANSPORT OF DANGEROUS GOODS

PROPER SHIPPING NAME: Hydrofluoric acid solution

PRIMARY HAZARD CLASS/DIVISION: 8 (6.1)

UN/NA NUMBER: UN1790

PACKING GROUP: II

LABEL: Corrosive and Poison

OTHER SHIPPING INFORMATION: No data available.

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Hydrofluoric acid solution

PRIMARY HAZARD CLASS/DIVISION: 8 (6.1)

UN/NA NUMBER: UN1790

PACKING GROUP: II

LABEL: Corrosive and Poison

PLACARD: Consult applicable regulations

IATA NOTE: Consult applicable regulations on packaging requirements and quantity limitations.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES:

FIRE: No. **PRESSURE GENERATING:** No. **REACTIVITY:** No. **ACUTE:** Yes.
Acute health **CHRONIC:** Yes.

313 REPORTABLE INGREDIENTS: This product contains the following chemicals regulated under SARA Title III, section 313:

Hydrofluoric Acid 7664-39-3 1-2.3%

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: The RQ of this product based on the RQ of hydrogen fluoride is 4000 lbs.

REPORTABLE SPILL QUANTITY: The RQ of this product based on the RQ of hydrogen fluoride is 4000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

RCRA STATUS: See section 13.

MEXICO

Regulated for transportation.

STATE REGULATIONS

MASSACHUSETTS

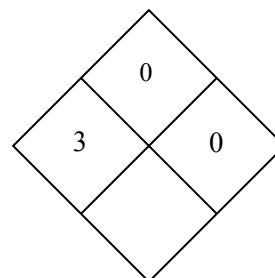
Contains one or more substances regulated by the Massachusetts Substance List.

CALIFORNIA

PROPOSITION 65 STATEMENT: This product contains no ingredients known to the state of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

HMIS RATINGS	
HEALTH:	3
FLAMMABILITY:	0
REACTIVITY:	0
PERSONAL PROTECTION:	X

NFPA RATINGS

SDS Revision Date: December 1, 2015