



# MATERIAL SAFETY DATA SHEET

Copyright: 1997

Effective Date: 1/1/08

Supersedes: 5/14/07

Emergency #: 405-745-2070

## SECTION I. IDENTIFICATION

PRODUCT NAME: **EF-Restoration Cleaner**

CHEMICAL NAME & SYNONYMS: Ammonium Acid Fluoride- Polyethoxylated tert-dodecyl sulfur compounds

PROCESSORS NAME: Chemical Products Industries, Inc., 7649 Southwest 34th Street,  
Oklahoma City, OK 73179, (405/ 745-2070)

CHEMICAL FAMILY: Ammonium Acid Salt- Ethoxylated mercaptan

## SECTION II. COMPONENTS

<u>INGREDIENTS</u>	<u>CAS NUMBER</u>	<u>NFPA CODE</u>	<u>ACGIH TLV/TWA</u>	<u>OSHA PEL/TWA</u>
-Ammonium Hydrogen Fluoride	7664-39-3	4,0,1	3 ppm	3 ppm
-Nonionic Surface Active Agents	Accession # 89157	3,1,0	N/A	N/A

## SECTION III. HEALTH HAZARDS

EFFECTS OF OVEREXPOSURE (OSHA 1910.1200 Hazard Communication Standard): Eye and Skin exposure may cause severe irritation and burns. Product may be absorbed through the skin and may produce signs of fluorosis such as weight loss, brittleness of bones, anemia, weakness and stiffness of joints. Ingestion may cause severe irritation to gastrointestinal tract, nausea, vomiting and abdominal pain. Death may occur from respiratory paralysis. Chronic exposure may lead to fluorosis. Internal bleeding may develop. Inhalation may cause severe irritation to mucous membranes and possibly pulmonary edema. Effects may not be immediately apparent, especially with dilute solutions. First Aid procedures should be followed even in cases of suspected contact.

- **EYES CONTACT:** Flush with large amounts of water for at least 15 minutes, until no evidence of chemical remains. Continue irrigating with normal saline until the PH has returned to normal(30-60 minutes). Cover with sterile bandages and seek medical attention immediately.
- **SKIN CONTACT:** Remove contaminated clothing and shoes. Wash exposed areas thoroughly with soap and water for at least 15 minutes. In case of chemical burns cover area with sterile, dry dressing. Bandage securely but not too tightly. Get medical attention immediately.
- **INHALATION:** Remove to fresh air. Provide artificial respiration if breathing has stopped. Maintain airway and administer oxygen, if available. Administration of oxygen should be performed by qualified personnel. Get medical attention immediately.
- **INGESTION:** Get medical attention immediately! Do not induce vomiting. Drink copious amounts of water, milk, lime water or a solution of calcium gluconate. Get medical attention immediately!

### Listed In The Following:

-International Agency for Research on cancer monographs (IARC)	---	NO
-National Toxicology Program annual report on carcinogens (NTP)	---	NO
-OSHA subpart Z	---	NO
-Massachusetts Right To Know Laws	---	YES
-New Jersey Right To Know Laws	---	YES
-Comprehensive Env. Response, Compensation and Liability Act	---	YES

- Resource Conservation 7 Recovery Act (RCRA) --- NO
- Sara 302 Extremely Hazardous Substance --- NO
- Warning: This product contains detectable amounts of a chemical known to the state of California to cause cancer/birth defects or other reproductive harm.

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**SECTION IV. FIRST AID MEASURES**

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**EMERGENCY FIRST AID PROCEDURES:**

- EYES CONTACT: Flush with large amounts of water for at least 15 minutes, until no evidence of chemical remains. Continue irrigating with normal saline until the PH has returned to normal(30-60 minutes). Cover with sterile bandages and seek medical attention immediately.
- SKIN CONTACT: Remove contaminated clothing and shoes. Wash exposed areas thoroughly with soap and water for at least 15 minutes. In case of chemical burns cover area with sterile, dry dressing. Bandage securely but not too tightly. Get medical attention immediately.
- INHALATION: Remove to fresh air. Provide artificial respiration if breathing has stopped. Maintain airway and administer oxygen, if available. Administration of oxygen should be performed by qualified personnel. Get medical attention immediately.
- INGESTION: Get medical attention immediately! Do not induce vomiting. Drink copious amounts of water, milk, lime water or a solution of calcium gluconate. Get medical attention immediately!

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**SECTION V. FIRE AND EXPLOSION HAZARD DATA**

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Lower Flammability Limits (% in air):	Not Applicable
Flash Point (And Method) :	Material Does Not Exhibit A Flash Point
Flammability Classification :	Nonflammable
Recommended Extinguishing Media:	CO2, Dry Chemical, Foam, Water Spray
Special Fire Fighting Procedures:	Fire Fighters must be equipped with appropriate protective apparel and Niosh-approved breathing apparatus.
Usual Fire/Explosion Hazards:	Decomposes on heating. Fumes are corrosive and toxic.
Stability:	Stable
Conditions to Avoid:	May burn but does not burn readily. Flammable, poisonous gasses
Incompatibility With Other Materials:	Strong Acids and Alkalies; Glass and Metals

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**SECTION VI. SPILL, LEAK & DISPOSAL PROCEDURES**

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- Procedures if material is spilled or released:
- Sweep up and containerize. Wash area of spill thoroughly after neutralizing with lime.
- Waste disposal procedures:
- Dispose of material according to local, state, and federal pollution regulations.

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**SECTION VII. HANDLING AND STORAGE**

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**Precautions To Be Taken In Handling and Storage:**

- This product is toxic by inhalation, ingestion and skin absorption.
- This product is corrosive to tissues.
- Avoid contact in all forms.
- Store material in a cool, dry, well-ventilated area.
- Treat empty containers as hazardous due to material residue.
- Continue to follow all label precautions with empty containers.

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### SECTION VIII. PERSONAL PROTECTION

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Respiratory Protection:	If Hydrogen Fluoride levels are above the TLV a Niosh-Approved respirator with acid vapor cartridges is required. A dust mist respirator is required at all times when using this product.
Local Exhaust:	Sufficient local exhaust ventilation to maintain exposure below the TLV.
Clothing:	Acid resistant PVC or neoprene rain suit and rubber boots with protective pants on the outside of the boot.
Protective Gloves:	Rubber gloves with gauntlets
Eye Protection:	Chemical safety goggles or full face shield
Other Protective Equipment:	Eye-wash; Safety shower nearby

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### SECTION IX. - PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE:	Cloudy white liquid.
ODOR:	dull acidic /Grapefruit odors
pH: (Typical):	3.0-4.0
BOILING POINT:	100 C
VAPOR PRESSURE, at 20 deg. C.:	17.5 mm of Hg
SOLUBILITY IN WATER:	Soluble
SPECIFIC GRAVITY (H <sub>2</sub> O = 1):	1.04 g/cc (8.63 #/gal)
PERCENT VOC, g/1000g:	10

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### SECTION XIII. DISPOSAL CONSIDERATIONS

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Keep out of lakes, streams and water ways. Small quantities may be flushed to sanitary or industrial sewer. Disposal of large quantities should comply with all federal, state and local guidelines.

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### SECTION XIV. TRANSPORT INFORMATION

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PROPER DOT SHIPPING NAME:	Ammonium Hydrogen difluoride, Solution
- DOT HAZARD CLASS:	8
- DOT ID# and Packing Group	II
- EMERGENCY RESPONSE GUIDE:	Not applicable
- UN/NA ID NUMBER:	2817
- LABEL:	Corrosive
- PLACARD:	Corrosive

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**SECTION XVI. OTHER INFORMATION**

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APPROVED BY: \_\_\_\_\_  
Floyd E. Farha, Ph.D.

DATE: 1/1/08  
SUPERCEDES: 5/14/07

^All terms and abbreviations have been defined in various government publications, or are standard chemical terms. The data and recommendations herein are based upon our own research and the research of others, and are believed to be accurate. However no warrantee or guarantee of their accuracy is made. The product is distributed without warrantee, expressed or implied, including the limited warranties of merchantability of fitness for a particular purpose.

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