



Product Information: 203-723-1437 Emergency Assistance: P-ChEM 1-800-424-5571

## SAFETY DATA SHEET

### Ambex AL-CR

#### 1. IDENTIFICATION OF SUBSTANCE AND SUPPLIER

Product Identifier: Aluminum Etchant

Supplier Details: Ambion Corporation  
37 Naugatuck Drive  
Naugatuck, CT 06770  
Tel: 203-723-1437  
Fax: 203-723-0101  
P-ChEM: 1-800-424-5571

Emergency Contact

#### 2. HAZARDS IDENTIFICATION

Danger!!

OSHA Hazards: Corrosive

Hazard Statement(s)

- H272 May intensify fire; oxidizer  
H290 May be corrosive to metals  
H301 Toxic if swallowed  
H310 + H330 Fatal in contact with skin or if inhaled  
H314 Causes severe skin burns and eye damage  
H317 May cause an allergic skin reaction  
H318 Causes serious eye damage  
H335 May cause respiratory irritation  
H340 May cause genetic defects  
H350 May cause cancer  
H372 Causes damage to organs through prolonged or repeated exposure



Precautionary Statement(s)

- P202 Do not handle until all safety precautions have been read and understood  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P220 Keep/store away from clothing/combustible materials.  
P260 Do not breathe dust/fume/gas/mist/vapors/spray  
P262 Do not get in eyes, on skin or on clothing  
P264 Wash thoroughly after handling  
P270 Do not eat, drink or smoke when using this product  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor /physician.  
P303+352 IF ON SKIN: Wash with plenty of water.  
P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.  
P306+360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothing.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P332+313 If skin irritation occurs: Get medical advice/attention.  
P337+313 If eye irritation persists: Get medical advice/attention.  
P361 Remove/Take off immediately all contaminated clothing.  
P363 Wash contaminated clothing before reuse.

---

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	CAS #	EINECS#	WT%
Chromic Acid	1333-82-0	215-607-8	35-65
Potassium Ferrocyanide	13943-58-3	237-722-2	7-30
Sodium Nitrate	7631-99-4	231-554-3	12-35
Sodium Silicofluoride	16893-85-9	240-934-8	5-25

---

### 4. FIRST AID MEASURES

**Ingestion (Swallowing):** DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

**Inhalation (Breathing):** Remove patient from contaminated area. If breathing has stopped, give mouth to mouth resuscitation, then oxygen if needed. Get immediate medical attention.

**Skin Contact:** Causes severe burns unless immediately washed off. Remove contaminated clothing at once while washing affected area with plenty of water for at least 15 minutes. Call a physician.

**Eye Contact:** Wash eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids for occasionally. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.

---

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Water, dry chemical, CO2 or foam. Whatever is appropriate for surrounding fire.

Use any means suitable for extinguishing surrounding fire. Contact with some metals (particularly magnesium, aluminum and galvanized zinc) can rapidly generate hydrogen, which is explosive. Emits toxic fumes under fire conditions.

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

---

NFPA	Health	Flammability	Instability	Physical Hazards
	3	0	0	N/A

---

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:**

Do not inhale vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Take steps to prevent eye or skin contact or inhalation.

**Environmental precautions:**

Contain spill if possible and safe to do so. Prevent product from entering drains.

**Methods and materials for containment and cleaning up:**

To clean up spill, scrape up or use absorbent material. Wash contaminated area with alkaline cleaner and water. All clean up and disposal should be carried out in accordance with federal, state and local regulations.

---

### 7. HANDLING AND STORAGE

**Precautions for safe handling:**

Do not get on skin or in eyes. Do not inhale vapor or mist.

**Conditions for safe storage, including any incompatibilities:**

Keep in a tightly closed container. Store in a cool, dry, ventilated area. Protect against physical damage. Separated from acids and alkalis. Containers of this material may be hazardous when empty since they retain product residues.

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Limits:**

Material	CAS #	EINECS#	TWA (OSHA)	TLV (ACGIH)
Chromic Acid	1333-82-0	215-607-8	0.1mg/m3 (8h)	0.05 mg/m3 Ceiling
Potassium Ferrocyanide	13943-58-3	237-722-2	N/A	N/A
Sodium Nitrate	7631-99-4	231-554-3	N/A	N/A
Sodium Silicofluoride	16893-85-9	240-934-8	2.5 mg/m3 (8h)	2.5 mg/m3

**Appropriate engineering controls:**

General room or local exhaust ventilations is usually required to meet exposure limits.

**Individual protection measures, such as personal protective equipment:**

**Respiratory protection:** Where the potential for exposure exists use the appropriate regulatory compliant particulate filter respirator with full facepiece. Carefully read and follow the respirator manufacturer's instructions and information.

**Eye Protection:** Close fitting chemical safety goggles with faceshield.

**Hand protection:** Nitrile. Neoprene. Natural rubber.

**Skin and body protection:** For operations where spillers or splashes can occur, use impervious body covering and boots.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point :	N/A
Vapor Pressure (mm. Hg) :	N/A
Vapor Density (Air=1):	N/A
Solubility in Water:	Moderately soluble
Specific Gravity (Water=1) :	N/A
Melting Point :	N/A
Evaporation Rate (n-BuOH=1) :	N/A
Appearance:	Mixed dark red/white solid
Odor:	Slight acrid odor

## 10. STABILITY AND REACTIVITY

**Stability:** Stable

**Conditions to Avoid:** Contact with flame, hot surfaces or extreme heat may produce toxic gases (cyanide, oxides of nitrogen, chromium).

**Incompatibility (Materials to Avoid):** Avoid organic materials. Contact with many metals (zinc, aluminum, magnesium, iron) may produce highly flammable hydrogen gas. Contact with acids may produce cyanide gas.

**Hazardous Decomposition or Byproducts:** Oxides of nitrogen and chrome, cyanide gas.

**Hazardous Polymerization:** Will not occur.

---

## 11. TOXICOLOGICAL INFORMATION

Routes of Exposure:  
Eye, skin, inhalation, and ingestion.

Acute Toxicity:

Material	CAS #	EINECS#		
Chromic Acid	1333-82-0	215-607-8	Oral	Rat: LD50=100 mg/kg
Potassium Ferrocyanide	13943-58-3	237-722-2	Acute Inhalation	Rat: LC50=0.167 mg/l
Sodium Nitrate	7631-99-4	231-554-3	Oral	Rat: LD50=3613 mg/kg
			Oral	Rat: LD50=3430 mg/kg
Sodium Silicofluoride	16893-85-9	240-934-8	Dermal	Rat: LD50>5000 mg/kg
			Oral	Rat: LD50>25-<2000 mg/kg
			Inhalation	Rat: LC50ca. 1814 mg/l/4hr

Symptoms: Skin and eye irritation. Corrosive.

Short Term exposure: Causes severe burns to the eyes. Small quantities can result in permanent damage and/or loss of vision. For skin contact, corrosive action causes burns and frequently deep ulcerations with subsequent scarring. Prolonged contact destroys tissue. Dust or mist from solutions can cause irritant dermatitis.

Long Term exposure: The effects of long-term, low level exposure have not been determined.

Carcinogenicity: Chromic Acid may cause cancer.

---

## 12. ECOLOGICAL INFORMATION

None available

---

## 13. DISPOSAL CONSIDERATION

Product should be disposed of by federally approved hazardous waste disposal facility.

---

## 14. TRANSPORT INFORMATION

UN number	UN3085
UN proper shipping name	Oxidizing substance, solid, N.O.S. (Chromic Acid)
Transport Hazard Class	5.1, 8
Packing Group	II

---

## 15. REGULATORY INFORMATION

Not available

---

## 16. OTHER INFORMATION

Date Prepared: March 7, 2016

---