



CYANTEK CORPORATION

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MATERIAL SAFETY DATA SHEET

CR-14**SECTION I****MATERIAL INFORMATION**

MANUFACTURER:
CYANTEK CORPORATION
3055 OSGOOD COURT
FREMONT, CA 94538 (510) 651-3341

24 HOUR EMERGENCY RESPONSE
CHEMTREC: 800-424-9300 OR 202-483-7676

NEPA RATING

HEALTH: 2
FIRE: 0
REACTIVITY: 2

0=LEAST, 1=SLIGHT, 2=MODERATE,
3=SERIOUS, 4=SEVERE

TRADE NAME AND SYNONYMS: CR-14 Chromium Etchant

CAS NUMBER: N/A

CHEMICAL FAMILY: Acid / Oxidizer

FORMULA: $\text{CH}_3\text{COOH} + \text{Ce}(\text{NH}_4)_2(\text{NO}_3)_6 + \text{H}_2\text{O}$

SECTION II**HAZARDOUS INGREDIENTS**

<u>INGREDIENTS</u>	<u>% wt)</u>	<u>EXPOSURE LIMITS</u>	<u>CAS NUMBER</u>
Acetic Acid	8%	10 ppm TLV (ACGIH)	64-19-7
Ceric Ammonium Nitrate	22%	None Established	16774-21-3

SECTION III**PHYSICAL AND CHEMICAL CHARACTERISTICS**

MOLECULAR WEIGHT:	N/A	SOLUBILITY IN WATER:	Complete
BOILING POINT (F):	212	SPECIFIC GRAVITY (g/ml):	1.17
FREEZING POINT (F):	Approx. 32	APPEARANCE & COLOR:	Orange / Red Liquid
VAPOR PRESSURE (mm Hg):	N/A	ODOR:	Slight Vinegar Odor
VAPOR DENSITY (Air =1):	N/A		
PERCENT VOLATILES (by vol):	9%		

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SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (F): N/A (TAG CLOSED CUP)

EXPLOSION LIMIT (% by vol): N/A LOWER: UPPER:

EXTINGUISHING MEDIA:

This substance is not combustible but is very reactive. Use water fog or carbon dioxide.

SPECIAL FIREFIGHTING PROCEDURES:

Use water spray to cool exposed containers. Block sewers in the path of areas. Prevent the boiling of this formulation.

FIREFIGHTERS SHOULD WEAR:

Wear goggles.
Wear rubber gloves and boots.
Wear acid protective clothing.
Wear self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

No explosion hazard.

Dangerous when heated to decomposition. Emits toxic fumes. Material is not combustible, but is hazardous if concentrated by evaporation.

SECTION V HEALTH HAZARD INFORMATION**LISTED AS CARCINOGEN:**

Not listed as carcinogen.

EFFECTS OF OVEREXPOSURE:

Eye contact is very irritating and can be corrosive.
Ingestion causes severe burns of mouth and stomach.
Prolonged contact with skin may cause a burn.

FIRST AID PROCEDURES:**EYE CONTACT:**

Hold eyelids open and flush with plenty of water.
Get medical care.

SKIN CONTACT:

Flush affected areas with plenty of water. If irritation persists after washing, get medical attention.
Remove contaminated clothing. Do not scrub.

INHALATION:

Move to fresh air. Consult a physician if prolonged exposure occurs.

INGESTION:

Give large amounts of water. Get medical attention immediately.

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SECTION VI**REACTIVITY DATA****STABILITY:**

Stable under normal conditions.

INCOMPATIBILITY:

Incompatible with strong caustics. This formulation contains water so it will react with water-reactive substances.

HAZARDOUS DECOMPOSITION PRODUCTS:

Releases toxic gases if boiled. Releases flammable and toxic corrosive gases when heated to evaporation.

HAZARDOUS POLYMERIZATION:

No hazardous polymerization expected.

SECTION VII**SPILL OR LEAK PROCEDURES****STEPS TO BE TAKEN:**

Contain the spill by diking or absorbing the liquid.

Ventilate area of spill or leak.

Persons with no protective equipment/clothes should be restricted from areas of spill/leak.

Avoid skin contact with substance.

Handling should be the same as for all corrosive acids.

Do not allow this substance to enter into the sewer system.

WASTE DISPOSAL:

Dispose in approved disposal site following federal, state, local regulations.

It does not contain heavy metals.

Empty containers could be disposed in regular disposal site after triple rinse.

SECTION VIII**SPECIAL PROTECTION****PERSONAL PROTECTIVE EQUIPMENT**

Use gloves and splash-proof safety goggles.

Eye wash fountain should be available.

Use protective clothing of rubber or similar nonpermeable material.

Use NIOSH-approved respirator for acid vapors.

VENTILATION:

Do not use dilution ventilation.

Do not use dry dust collectors.

SECTION IX**SPECIAL PRECAUTIONS**

Store in a cool place.

Avoid skin contact or breathing the vapors of this formulation.

Chemical is very reactive. Store away from other chemicals.

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SECTION X**REGULATORY INFORMATION**

SARA/TITLE III DATA (For Ingredients)

CERCLA HAZARDOUS SUBSTANCES: Acetic Acid (5000#)
(WITH REPORTABLE QUANTITIES)

EXTREMELY HAZARDOUS SUBSTANCES: None

TOXIC CHEMICALS (SECTION 313): None

DOT INFORMATION

HAZARD CLASS: Corrosive

PROPER SHIPPING NAME: Corrosive Liquid, Acidic, Inorganic N.O.S. (Acetic Acid, Ceric Ammonium Nitrate)

UN/NA NUMBER: UN 3264

TSCA INVENTORY
(For Ingredients)

TSCA INVENTORY: All ingredients on TSCA inventory.

PROPOSITION 65 STATUS
(For Ingredients)

PROP. 65 LIST: No ingredients on Prop. 65 list.

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