

# MATERIAL SAFETY DATA SHEET

## CR-7S

### 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

**NFPA RATING**

HEALTH: 2

FIRE: 0

REACTIVITY: 2

0=LEAST, 1=SLIGHT, 2=MODERATE,

3=SERIOUS, 4=SEVERE

TRADE NAME AND SYNONYMS: CR-7S Chromium Etchant with Surfactant

CAS NUMBER: N/A

CHEMICAL FAMILY: Acid / Oxidizer

FORMULA: HCL04 + Ce (NH4) 2 (NO3) 6 + H2O

### SECTION II HAZARDOUS INGREDIENTS

<u>INGREDIENTS</u>	<u>% (wt)</u>	<u>EXPOSURE LIMITS</u>	<u>CAS NUMBER</u>
Perchloric Acid	6%	None Established	7601-90-3
Ceric Ammonium Nitrate	9%	None Established	16774-21-3
Potassium Perfluoroalkyl	1%	1mg/m3 (Suggested)	2795-39-3
Sulfonates			
Water	84%	None Established	7732-18-5

### SECTION III PHYSICAL AND CHEMICAL CHARACTERISTICS

MOLECULAR WEIGHT: N/A SOLUBILITY IN WATER: Complete

BOILING POINT (F): 212 SPECIFIC GRAVITY (g/ml): 1.10

FREEZING POINT (F): Approx. 32 APPEARANCE &amp; COLOR: Orange / Red Liquid

VAPOR PRESSURE (mm Hg): N/A ODOR: Faint Acid Odor

VAPOR DENSITY (Air =1): N/A

PERCENT VOLATILES (by vol): N/A

## CR-7S

## 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 spreading spill to prevent entry.

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.

# CR-7S

## 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.

# CR-7S

PAGE 4 OF 4

## SECTION X REGULATORY INFORMATION

### SARA/TITLE III DATA

(For Ingredients)

CERCLA HAZARDOUS SUBSTANCES: None

(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. (Perchloric Acid, Ceric Ammonium Nitrate)

UNNA 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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