

CYANTEK CORPORATION

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CR-7

Material Safety Data Sheet

1 Product and Company Identification:

Product name: CR-7 Chromium Etchant

Manufacturer:

CYANTEK CORPORATION
3055 Osgood Court
Fremont, CA 94538
(510) 651-3341

24 Hour Emergency Telephone Number:

CHEMTREC: (800) 424-9300 or (202) 483-7676

2 Composition/Information on Ingredients:

Chemical formula: $\text{HClO}_4 + \text{Ce}(\text{NH}_4)_2(\text{NO}_3)_6 + \text{H}_2\text{O}$

Hazardous components:

Component	Percent by wt.	CAS Number
Ceric Ammonium Nitrate	9%	16774-21-3
Perchloric Acid	6%	7601-90-3

3 Hazards identification

Hazard description: Corrosive

Irritating to eyes, skin and respiratory system.

Classification system

The classification was made from the hazardous components' MSDS's.

4 First aid measures

Inhalation: Supply fresh air; consult doctor in case of complaint.

Skin contact: Flush affected areas with plenty of water, remove contaminated clothing, get medical attention if irritation persists.

Eye contact: Rinse opened eye for several minutes under running water. If irritation persists, consult a doctor.

Ingestion: Give large amounts of water. Consult a doctor immediately.

5 Fire fighting measures

Suitable extinguishing agents: CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Protective equipment Wear goggles, rubber gloves and boots, self contained breathing apparatus, and acid protective clothing.:

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6 Accidental release measures

Personal precautions: Wear goggles, rubber boots and gloves, and acid-protective clothing

Environmental precautions: Do not allow substance to enter sewage system, surface or ground water.

Methods for cleaning up: Contain the spill by diking/absorbing with liquid-binding material (sand, diatomite, acid binders, universal binders). Ensure adequate ventilation.

7 Handling and storage

Handling

Information for safe handling:

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about protection against explosions and fires:

No special measures required.

Storage

Store between 50 and 77 Degrees F.

Keep containers tightly sealed

Store away from strong caustics

8 Exposure controls and personal protection

Engineering controls:

No further data; see section 7.

Exposure limits:

Ceric Ammonium Nitrate: None established

Perchloric Acid: None established

General protective and hygienic measures:

Keep away from foodstuffs and beverages.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device.

In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands: Acid resistant gloves.

Eye protection: Tightly sealed goggles.

Body protection: Acid resistant protective work clothing.

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9 Physical and chemical properties:

Physical state: Liquid
Color: Orange
Odor: Faint acid odor
Boiling point: Undetermined
Flash point: Not applicable
Self ignition temperature: Not applicable
Danger of explosion: Product does not present an explosion hazard.
Vapor pressure at (20 °C): 23 hPa
Density at (20 °C): 1.1 g/cm³
Solubility in water: Fully soluble
Percent Water: 85.0 %

10 Stability and reactivity

Thermal decomposition avoided: No decomposition
Dangerous reactions: No dangerous reactions known
Dangerous products of decomposition:
No dangerous decomposition products known
Avoid boiling of product

11 Toxicological information

Acute toxicity: Unknown
Primary irritant effect on the skin and eye: Irritant
Sensitization: No sensitizing effects known.

12 Ecological information:

General notes:
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

Do not allow product to reach sewage system.
Dispose of product (including packagings) in accordance with applicable regulations.

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14 Transportation information

Land (CFR 49), Maritime (IMDG), Air (ICAO)

Class: 8 (Corrosive Liquid)

UN Number: 3264

Proper Shipping Name: Corrosive liquid, acidic, inorganic n.o.s.
(Ceric Ammonium Nitrate, Perchloric Acid)

Packing Group: III

15 Regulations

CERCLA Hazardous Substances (with reportable quantity): None

Extremely Hazardous Substances: None

Toxic Chemicals (Section 313): None

TSCA Inventory: All ingredients on TSCA inventory

Proposition 65 List: None

Safety phrases:

Do not breathe fumes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing.

In case of accident seek medical advice immediately.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.