

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

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MATERIAL NAME: **CHROMIUM ETCHANT 1020**

REVISED: July 2009

CHEMICAL FAMILY: Nitric acid/ceric ammonium nitrate aqueous solution

SECTION 2. HEALTH HAZARD INFORMATION

GHS Classifications

Oxidizing liquids : Category 3
Corrosive to Metals: Category 1
Acute toxicity Oral : Category 4
Acute Toxicity Dermal: Category 4
Acute toxicity Inhalation : Category 4
Skin corrosion / Skin irritation : Category 1C
Serious eye damage / Eye irritation : Category 1
Respiratory or skin sensitization : Not classified
Special target organ systemic toxicity single exposure: Category 2
Special target organ systemic toxicity repeated exposure : Category 2
Acute aquatic environmental hazards : Not classified
Chronic aquatic environmental hazards: Not classified

Pictograms or Hazard symbols



Warning: May intensify fire. Oxidizer.



Warning: May be corrosive to metals



Warning: Harmful if swallowed, in contact with skin, or inhaled.



Danger: Causes severe skin burns and eye damage. Causes serious eye damage.



Warning. Health hazard. May cause damage to lungs, eyes, and mucous membranes through prolonged or repeated exposure.

Precautionary Statement Prevention

Use only in a well-ventilated area. Do not eat, drink or smoke when using this product. Do not breathe fume/gas/mist/vapors/spray.

Wear protective gloves/protective clothing /eye protection/face protection.

Wash hands thoroughly after handling.

Avoid release to the environment

SECTION 3.COMPOSITION/INFORMATION ON INGREDIENTS

Material		Wt %	Toxicity
Nitric Acid	CAS# 7697-37-2	4-6	2 ppm (TLV)
Ceric Ammonium Nitrate	CAS# 16774-21-3	10-20	244 ppm
Water	CAS# 7732-18-5	74-86	
Total		100	

SECTION 4. FIRST AID MEASURES

EFFECTS OF OVEREXPOSURE

FIRST AID:

Eye Contact: Corrosive to naked eye; in case of contact flush eyes well for 15 minutes, lifting the lower and upper eyelids occasionally. May cause blindness. Seek medical attention.

Skin Contact: Obtain medical attention: Corrosive to exposed skin. Flush skin well with water for 15 minutes, wash with soap and water. Remove affected clothing, get medical attention.

Inhalation: If mist or fumes are inhaled, remove to fresh air. If not breathing give artificial respiration. Seek medical attention. Effects may be delayed. May cause chemical burns to the respiratory tract.

Ingestion: May cause severe and permanent damage to the digestive tract. Causes gastrointestinal burns and perforation of the digestive tract. Get medical attention immediately.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	<u>LOWER</u>	<u>UPPER</u>
non-flammable	NA		NA	NA

Extinguishing media: Water spray or fog, carbon dioxide and dry chemical. Do not use organic media.

Special fire fighting procedures: Wear chemically retardant gear and NIOSH approved self-contained breathing apparatus. Thermal decomposition produces irritating and toxic fumes. Contact with oxidizing reagents may cause extremely violent combustion.

solvents, combustibles, chromic acid, flammables, cyanides, sulfides.

Hazardous decomposition products: Nitrogen oxides, carbon dioxide, carbon monoxide

Hazardous	May occur	Conditions to avoid: Excess heat, damp.
polymerization:	Will not occur X	

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE:

LC₅₀ (Inhalation, rat): 1.35 mg/L/4 h (nitrogen dioxide) (anhydrous substance)

LDLo (oral, human): 4500 mg/kg (anhydrous substance) (IUCLID)

Specific symptoms in animal studies: burns to eyes (rabbit), burns to skin (rabbit)

SUBACUTE TO CHRONIC TOXICITY:

Bacterial mutagenicity: Ames test: negative

OTHER DATA:

Corrosive. Vapor inhalation burns mucous membranes; causes coughing, dyspnoea.

Inhalation may lead to oedemas in the respiratory tract. Burns skin, eyes (risk of blindness). Swallowing results in damage to mouth esophagus, and gastrointestinal tract; risk of perforation; bloody vomiting; death.

SECTION 12. ECOLOGICAL INFORMATION

Bioaccumulation : There is no evidence of bioaccumulation.

Ecotoxicity : Biologic effects:

Toxic effect on fish and plankton. Harmful effect due to pH shift. Forms corrosive mixtures with water even when diluted. Does not cause biological oxygen deficit.

Hazardous to drinking water supplies.

Fish toxicity: *Gambusia affinis* LC₅₀: 756 mg/L/96 h

Hazard for drinking water: Fish: LC₅₀ > 1500 mg/L.

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose of in accordance with all federal state and local regulations. Send waste to an approved waste disposal facility.

SECTION 14. TRANSPORTATION INFORMATION

Class 8, 5.1

PG II

UN3093

Shipping Name: Corrosive Liquid, Oxidizing, N.O.S. (Nitric Acid and Ceric Ammonium Nitrate)

SECTION 15. REGULATORY

Symbol: C, Corrosive

R-Phrase:

R: Contact with combustible material may cause fire.
R21/22: Harmful in contact with skin and if swallowed.
R35: Causes severe burns.
R41: Risk of serious damage to eyes.

S-Phrases:

S17: Keep away from combustible material.
S23-36/37/39-45 Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 16. OTHER INFORMATION

NFPA Codes:

Health: 4

Flammability: 0

Reactivity: 1

R8: Contact with combustible material may cause fire.

R35: Causes severe burns.

All ingredients of this product are listed on the US TSCA inventory under their parent anhydrous compounds.