



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material Name** FE-200L  
**Revision Date** 1/16/2014  
**Version #** 05  
**Product Use** Iron Control  
**Manufacturer / Supplier** FTS International Services, LLC  
2500 HWY 62 West  
Chickasha, OK 73018  
US  
General information: 1-405-222-2300  
**Emergency** 24 Hour Emergency: INFOTRAC: 1-800-535-5053

## 2. Hazards Identification

**Physical State** Liquid  
**Appearance** Clear yellow liquid.  
**Emergency Overview** This material is considered hazardous by the OSHA Hazard Communication Standard [29 CFR 1910.1200]. Corrosive to aluminum. Contains a small amount of Impurity (Tisodium NTA) which has been shown to cause kidney damage and cancer (based on animal data).  
**OSHA regulatory status** Not available.  
**Routes of exposure**  
**Eyes** Eye contact may cause moderate irritation.  
**Skin** Brief skin contact is not expected to cause irritation. However, repeated or prolonged contact may cause irritation.  
**Inhalation** Exposure to an excessive concentration of vapor, mist or aerosol may cause respiratory tract may cause irritation.  
**Ingestion** This product has a low order of acute toxicity.  
**Potential environmental effects** Not available.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Tetrasodium EDTA	64-02-8	37.0 – 41.0
Sodium Hydroxide	1310-73-2	0.5 – 1.9
Trisodium Nitrilotriacetic acid	5064-31-3	1.0 – 2.0

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First Aid Measures

### First aid procedures

**Eye Contact** Flush eyes with large quantities of running water for a minimum of 15 minutes. If easy to do, remove contact lenses, if worn. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. DO NOT let victim rub eye(s). Do not attempt to neutralize with chemical agents. Oils or ointments should not be used at this time. Get medical attention.

**Skin Contact** Remove contaminated clothing, shoes and equipment. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing and shoes before reuse. Get medical attention if irritation symptoms occur.

**Inhalation** Remove victim to fresh air. If breathing becomes difficult, oxygen may be given, preferably under physician's advice. If not breathing, give artificial respiration. Get medical attention.

**Ingestion** Call a physician immediately. ONLY induce vomiting at the instructions of a physician. If victim is

conscious, rinse mouth and give water to drink. Never give anything by mouth to an unconscious person.

**Notes to physician**

Not available.

## 5. Fire Fighting Measures

**Flammable Properties**

Not flammable or combustible.

**Extinguishing media**

**Suitable extinguishing media**

Water fog or spray, dry chemical, foam or carbon dioxide extinguishing agents.

**Unsuitable extinguishing media**

Not available.

**Specific Hazards arising from the Chemical**

Not available.

**Firefighting equipment / instructions**

Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

**Specific Methods**

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate all non-essential personnel from the fire area.

**Hazardous combustion products**

Thermal decomposition products may release toxic and/or hazardous fumes and gases, including nitrogen oxides and carbon oxides.

## 6. Accidental Release Measures

**Personal precautions**

Safely stop source of spill. Dike area to prevent spill from spreading. Restrict non-essential personnel from area. All personnel involved in spill cleanup should avoid skin and eye contact by wearing appropriate personnel protective equipment.

**Methods for cleaning up**

Soak up liquid with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal according to local, state or federal regulations.

## 7. Handling and Storage

**Handling**

Avoid inhalation and prolonged and/or repeated skin and eye contact. Wear goggles or face shield, rubber gloves, and protective clothing when handling.

**Storage**

Keep containers closed and dry. This material is suitable for any general chemical storage area. Isolate from incompatible materials such as strong oxidizing agents. Store in PVC, stainless steel or bituminized tanks. Avoid contact with aluminum, copper, copper alloys, nickel and zinc.  
Store in a sealed or original containers at temperatures between 32° and 95°F. Containers should not be opened until ready for use. It is recommended that products be retested if store for more than 3 years. Under ideal storage conditions, the shelf-life is almost indefinite.

## 8. Exposure Contols / Personal Protection

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Tetrasodium EDTA	Not available.	Not available.	Not available.	Not available.
Sodium Hydroxide	Not available.	2	Not available.	2
Trisodium Nitrotriacetic acid	Not available.	Not available.	Not available.	Not available.

**US. OSHA Table Z-1 Limits for Air Contaminates (29 CFR 1910.1000)**

Components	PEL	
	ppm	mg/m3
Tetrasodium EDTA	Not available.	Not available.
Sodium Hydroxide	Not available.	2

Trisodium Nitrilotriacetic acid Not available. Not available.

**Canada. Alberta OELs (Occupational Health Safety Code, Schedule 1, Table 2)**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Tetrasodium EDTA	Not available.	Not available.	Not available.	Not available.
Sodium Hydroxide	Not available.	Not available.	Not available.	Not available.
Trisodium Nitrilotriacetic acid	Not available.	Not available.	Not available.	Not available.

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Tetrasodium EDTA	Not available.	Not available.	Not available.	Not available.
Sodium Hydroxide	Not available.	Not available.	Not available.	Not available.
Trisodium Nitrilotriacetic acid	Not available.	Not available.	Not available.	Not available.

**Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) Components**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Tetrasodium EDTA	Not available.	Not available.	Not available.	Not available.
Sodium Hydroxide	Not available.	Not available.	Not available.	Not available.
Trisodium Nitrilotriacetic acid	Not available.	Not available.	Not available.	Not available.

**Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) Components**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Tetrasodium EDTA	Not available.	Not available.	Not available.	Not available.
Sodium Hydroxide	Not available.	Not available.	Not available.	Not available.
Trisodium Nitrilotriacetic acid	Not available.	Not available.	Not available.	Not available.

**Mexico. Occupational Exposure Limit Values**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Tetrasodium EDTA	Not available.	Not available.	Not available.	Not available.
Sodium Hydroxide	Not available.	Not available.	Not available.	Not available.
Trisodium Nitrilotriacetic acid	Not available.	Not available.	Not available.	Not available.

**Engineering controls**

Not available.

**Personal protective equipment**

**Eye / face protection**

Since eye contact causes irritation, chemical goggles and/or face shield or a full face respirator should be worn when handling this product.

**Skin protection**

Skin contact with the product should be minimized through the use of suitable protective clothing, gloves and footwear selected according to the use condition exposure potential.

**Respiratory protection**

Use of respiratory protection is generally not required. However, if use conditions generate vapor, mist or aerosol and adequate ventilation (e.g. outdoor or well-ventilated area) is not available, use a NIOSH-approved organic vapor respirator with dust, mist and fume filters to reduce potential or inhalation exposure. Where exposure potential necessitates a higher level of protection, use a NIOSH approved, positive-pressure/pressure-demand, air-supplied respirator. When using respirator cartridges or canister, they must be changed frequently (following each use or at the end of the work shift) to assure breakthrough exposure does not occur.

**General hygiene consideration**

All food and smoking materials should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, drinking and smoking, hands and face should be thoroughly washed.

**9. Physical and Chemical Properties**

<b>Appearance:</b>	Clear Yellow Liquid
<b>Color</b>	Yellow
<b>Odor</b>	Slight Ammonia
<b>Odor threshold</b>	Not available.
<b>Physical State</b>	Liquid
<b>Form</b>	Liquid
<b>pH</b>	13.5 (≈11.5 as 1% solution)
<b>Melting point</b>	Not available.
<b>Freezing point</b>	<0°F (<-18°C)
<b>Boiling point</b>	224.6°F (107.0°C)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Specific Gravity</b>	1.25 – 1.33
<b>Solubility (water)</b>	Miscible
<b>Partition coefficient (n-octanol/water)</b>	Log Pow < 0
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Bulk Density</b>	10.82 lb/gal
<b>VOC</b>	Not available.
<b>Viscosity</b>	20 mPa.s (68°F/ 20°C)
<b>Percent volatile</b>	Not available.

**10. Chemical Stability Reactivity Information**

<b>Chemical Stability</b>	This product is stable at ambient temperatures and atmospheric pressures. It is not self reactive and is not sensitive to physical impact.
<b>Conditions to avoid</b>	Avoid contact with aluminum, zinc, and other metals. Avoid prolonged storage at elevated temperatures.
<b>Incompatible material</b>	Strong oxidizers.
<b>Hazardous decomposition products</b>	Aqueous solution in contact with aluminum evolves hydrogen. Under fire conditions the product may support combustion and decomposes to give off carbon oxide fumes nitrogen oxides, and water vapor.
<b>Possibility of hazardous reaction</b>	Not available.

## 11. Toxicology Information

### Toxicological Data

#### Components

Tetrasodium EDTA

#### Test Results

Eyes: A 40% solution of Tetrasodium EDTA was classified as moderately irritating to rabbit eyes. Corneal opacity, iritis and moderate to severe conjunctivitis were reported.

Skin: ACUTE: A solution containing 40% Tetrasodium EDTA was not irritating to rabbit skin when applied undiluted for 4 hours. CHRONIC: Repeated or prolonged contact may cause irritation.

Inhalation: ACUTE: There were no clinical signs of toxicity when rats were exposed for 8 hours to an atmosphere enriched with Tetrasodium EDTA. The LC50 for Trisodium NTA component is greater than 5 mg/l (rats / 4hour test).

Ingestion: ACUTE: The oral LD50 is greater than 2,000 mg/kg (rat) for a 40% solution of Tetrasodium EDTA. CHRONIC: Chronic ingestion of NTA and its trisodium salt has been shown to cause kidney toxicity.

Sodium Hydroxide

Not available.

Trisodium Nitrilotriacetic acid

Not available.

#### Sensitization

Not determined.

#### Carcinogenicity

Tetrasodium EDTA

Not available.

Sodium Hydroxide

Not available.

Trisodium Nitrilotriacetic acid

Determined to be "possibly carcinogenic to humans (Group 2B) by IARC, a compound which "may reasonably be anticipated to be a human carcinogen" by NTP and a "select carcinogen" by OSHA.

#### Epidemiology

Not available.

#### Mutagenicity

Tetrasodium EDTA component is not mutagenic in a series of tests, including the Ames Assay, the Chromosomal Aberration, and the Mouse Lymphoma. NTA and its sodium salts were not genotoxic in experimental systems in vivo. Neither the acid nor its salts were genotoxic in mammalian cells in vitro and they were not mutagenic to bacteria. However, trisodium NTA has been shown to be positive in the BALB/c3T3 transformation assay when tested up to 7.8 mM.

#### Reproductive effects

EDTA and its sodium salts have been reported, in some studies, to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Exposures having no effect on the mother should have no effect on the fetus. Tetrasodium EDTA component is not teratogenic under conditions of the test [Pregnant female rats were administered 1374 mg Na2EDTA/kg/day on gestation days 7 to 14 in half the dose, twice daily. Clinical signs of maternal toxicity included diarrhea, reduce weight gain and depressed activity.] Trisodium NTA is not teratogenic and did not induce reproductive toxicity.

#### Teratogenicity

Not available.

#### Further Information

Cytotoxicity: Tetrasodium EDTA did not damage normal Rat kidney cells at doses of 0.1 to 20 µM. Long-term exposure to 0.1 to 5.0 µM was not toxic and did not inhibit DNA synthesis. Tetrasodium EDTA, administered to mice in drinking water at a dose of 25mM, caused a reduction of calcium in bone, liver and muscle. Zinc was reduced in kidneys, muscle and liver. Magnesium was reduced in bones and liver but was increased in the kidneys.

## 12. Ecological Information

### Ecotoxicological data

#### Components

#### Test Results

Tetrasodium EDTA

Fish (bluegill sunfish) 96hr: LC50 = 157 mg/L. 1030 mg/L and 2070 mg/L for product containing 39% Tetrasodium EDTA in very soft water, medium hard water and very hard water respectively. LC50 = 486 mg/L for solid Tetrasodium EDTA tested in very hard water.

Daphnia Magna 24hr: EC50 = 610 mg/L

Bacteria (Protozoa *Chillomonas paramecium*) Growth inhibition: EC50 = 663 mg/L

Sodium Hydroxide

Not available.

Trisodium Nitrilotriacetic acid

Not available.

#### Ecotoxicity

Algae (Cell multiplication inhibition test): toxicity threshold of Tetrasodium EDTA to the green

algae and the blue-green algae was 11 mg/L and 76 mg/L respectively.

<b>Persistence and degradability</b>	Tetrasodium EDTA (39% in water) was not biodegradable over 28 days in the Sturm CO2 evolution test and in the Closed Bottle Test conducted with natural seawater.
<b>Bioaccumulation / Accumulation</b>	Not available.
<b>Mobility in environmental media</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.

### 13. Disposal Considerations

<b>Waste codes</b>	Not available.
<b>Disposal instructions</b>	The characteristic of corrosivity per RCRA would be exhibited by unused product if it becomes a waste material. It is the responsibility of the waste generator to evaluate whether his wastes are hazardous by characteristic or listing. Dispose in accordance with all local, state, and federal regulations.
<b>Contaminated packaging</b>	Containers should be cleaned of residual product before disposal or return. Since emptied containers retain product residue, follow label warnings even after container is emptied. Empty containers should be disposed of or shipped in accordance with all applicable laws and regulations.

### 14. Transport Information

<b>DOT</b>	
<b>UN number</b>	UN3267
<b>Proper shipping name</b>	Corrosive liquid, basic, organic, n.o.s.(Ethylenediaminetetracetic acid tetrasodium salt 39%, Sodium hydroxide)
<b>Hazard class</b>	8
<b>Packing Group</b>	III
<b>Labels required</b>	
<b>DOT reportable quantity</b>	1000
<b>Additional information</b>	
<b>Special provisions</b>	
<b>Packaging exceptions</b>	
<b>Packaging non bulk</b>	
<b>Packaging bulk</b>	
<b>ERG number</b>	
<b>IATA</b>	
<b>UN number</b>	UN3267
<b>Proper shipping name</b>	Corrosive liquid, basic, organic, n.o.s.(Ethylenediaminetetracetic acid tetrasodium salt, Sodium hydroxide)
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>Additional information</b>	
<b>ERG code</b>	
<b>IMDG</b>	
<b>UN number</b>	UN3267
<b>Proper shipping name</b>	Corrosive liquid, basic, organic, n.o.s.(Ethylenediaminetetracetic acid tetrasodium salt, Sodium hydroxide)
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>EmS No</b>	

## 15. Regulatory Information

### US federal regulation

**CERCLA (Superfund) Reportable Quantity:** Sodium Hydroxide: 1000 lbs (454 kg)

### Superfund amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard Categories</b>	Immediate Hazard:	No
	Delayed Hazard:	No
	Fire Hazard:	No
	Pressure Hazard:	No
	Reactivity Hazard:	No

Section 302 extremely hazardous substance: None

Section 311 hazardous chemical: None

### Inventory Status

<b>Country</b>	<b>Inventory Name</b>	<b>On Inventory *</b>
Australia	AICS	Yes
Canada	DSL	Yes
Canada	NDSL	No
China	IECSC	Yes
Europe	EINECS	Yes
Europe	ELINCS	No
Japan	ENCS	Yes
Korea	ECL	No
New Zealand	NZI	No
United States / Puerto Rico	TSCA	Yes
Phillipines	PICCS	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

### WHMIS Information

Not available.

### State Regulation

State Right to Know Lists:

CA / FL / IL / MA / MN / NJ / PA / RI: Sodium Hydroxide

MA: Trisodium NTA

A related product "Trisodium NTA monohydrate" [CAS # 18662-53-8] is known to the State of California to cause cancer and is reportable under Proposition 65.

## 16. Other Information

### Further Information

HMIS® is a registered trade and service mark of the NPCA.

### HMIS® ratings

Health: 2

Flammability: 0

Physical Hazard: 0

A HMIS® rating including an \* indicates a chronic hazard.

### NFPA ratings

Health: 2

Flammability: 0

Instability: 0

**Disclaimer**

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