



MATERIAL SAFETY DATA SHEET

PRODUCT NAME: ECONO-HS1
REVISION DATE: OCTOBER 3, 2012
TELEPHONE NUMBER: 713-723-8416

For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident)
CALL CHEMTREC Day or Night 800-424-9300
For International, Call 703-527-3887 (Collect Calls Accepted)

**** FOR INDUSTRIAL USE ONLY ****

1. Product & Company Identification

Trade Name: ECONO-HS1
Company Name: Economy Polymers & Chemicals
Address: 435 E. Anderson Road, Houston, TX 77047
Phone Number: (713) 723-8416
Product Use: Iron Control Agent
Chemical Family: Organic Salt Solution
DOT: UN3267, Corrosive liquid, basic, organic, n.o.s., (contains Trisodium nitriloacetic acid, sodium hydroxide), 8, PG III

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Nitriloacetic Acid, Trisodium Salt	5064-31-3	40-42
Sodium Hydroxide	1310-73-2	0.5-2.0
Water	7732-18-5	55-60

3. Hazards Identification

Emergency Overview

Warning! Harmful if swallowed. Causes eye irritation. May cause skin and respiratory tract irritation. Contains Trisodium NTA which may cause kidney damage and cancer (based on animal data)

Potential Health Effects

Primary Route(s) of Exposure: Skin contact, eye contact, inhalation and ingestion.

Acute Exposure:

Eye Contact: Eye contact causes irritation

Skin Contact: Skin contact may cause mild irritation

Inhalation: Exposure to an excessive concentration of mist or vapor may cause respiratory tract discomfort and/or mild irritation.

Ingestion: If ingestion, this product may cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Carcinogenicity: Nitriloacetic acid (NTA) and its salts were determined to be "possible 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.

Medical conditions aggravated: There are not data available that address medical conditions that are generally recognized as being aggravated by exposure to this product.

Potential Environmental Effects: This product is not considered to be harmful to aquatic life, based on available data.

4. First Aid Measures

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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.

5. Fire Fighting Measures

Conditions of Flammability: Not flammable or combustible

Flash Point (Method): Not applicable (aqueous solution)

Upper Flammability Limit (% by volume): Not determined

Lower Flammability Limit (% by volume): Not determined

Autoignition Temperature: Not Applicable

Extinguishing Media: Use water fog or spray, dry chemical, foam or carbon dioxide extinguishing agents.

Fire Fighting Procedures: As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate all non-essential personnel from the area. Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

Fire & Explosion Hazards: This product is not defined as flammable or combustible. When involved in a fire, it does not contribute any unusual hazards.

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

NFPA HAZARD RATING: Health -2 Fire - 0 Instability - 0 Other - None

6. Accidental Release Measures

Spills/Leaks: Safely stop source of spill. Restrict non-essential personnel from area. All personnel involved in spill cleanup should avoid skin and eye contact by wearing appropriate personal protective equipment.

Cleanup: Soak in 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. Flush remainder with water and dispose accordingly. Do not allow water to enter water systems or water sheds.

7. Handling and Storage

Handling: Avoid inhalation and prolonged and/or repeated skin and eye contact.

Storage: Keep containers closed and dry. This material is suitable for any general chemical storage area. Isolate from strong oxidizing agents. Store in original packing or in PVC, PE, stainless steel or bitumized tanks. Avoid contact with aluminum, copper, copper alloys and nickel.

Maximum storage temperature: Store in a cool and dry place at ambient temperature.

General Comments: Containers should not be opened until ready for use. It is recommended to re-test the product after three years in storage

8. Exposure Controls/Personal Protection

Applicable Exposure Limits:

Chemical Name	OSHA-PELs (mg/m ³)	ACGIH-TLVs (mg/m ³)	NIOSH-RELs (mg/m ³)	AIHA -WEELs (mg/m ³)
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	TWA	STEL/ CEIL(C)	TWA	STEL/ CEIL(C)	TWA	STEL/ CEIL(C)	TWA	STEL/ CEIL(C)
Trisodium NTA	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Sodium Hydroxide	2.0	N/D	N/D	2.0 (C)	N/D	2.0 (C)	N/D	N/D
Water	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D

[Ref: ACGIH Guide to Occupational Exposure Values, 2008 Edition]

Engineering Controls – Ventilation: Special ventilation is usually not required under normal use conditions.

However, ensure that existing ventilation is sufficient to prevent the circulation and/or accumulation of vapor in the air.

Personal Protective Equipment (PPE)

Respiratory Protection: Use of respiratory protection is generally not required. However, if use conditions generate vapors, aerosols or fumes, (e.g. elevated temperatures), use a NIOSH-approved organic vapor respirator with HEPA (high efficiency particulate air) filters to reduce potential for 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 canisters, they must be changed frequently (following each use or at the end of the work shift) to assure breakthrough exposure does not occur.

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

Eye Protection: If the possibility of splashing or spraying of this material exists, chemical goggles and/or a full-face shield should be worn when handling this product.

Other Protection – General Hygiene Considerations: 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 potential for significant exposure to this material. Before eating, drinking, or smoking, hands and face should be thoroughly washed.

9. Physical and Chemical Properties

Physical State/Appearance/Odor:	Clear, pale yellow liquid with slight ammonia odor
Boiling Point:	212-221°F
Melting Point:	<0°F
pH (1% solution):	11-12
Partition Coefficient (n-octanol/water):	log P _{ow} < 0
Specific Gravity:	1.29
Decomposition Temperature:	>374°F

10. Stability and Reactivity

Stability: This product is stable at ambient temperatures and atmospheric pressures. It is not self-reactive and is not sensitive to physical impact.

Incompatibilities/Conditions to Avoid: Aqueous solution in contact with aluminum evolves hydrogen. This product is incompatible with strong oxidizers. Avoid contact with aluminum, copper, copper alloys and nickel. Avoid prolonged storage at elevated temperatures.

Polymerization: Hazardous polymerization is not expected to occur under normal temperatures and pressures.

Decomposition Products: Under fire conditions the product may support combustion and decomposes to give off carbon oxides fumes (CO, CO₂), nitrogen oxides and water vapor.

11. Toxicological Information

Inhalation

Acute Contact: The LC₅₀ for Trisodium NTA is greater than 5 mg/L (rats/ 4-hr test)

Chronic Contact: Repeated application of a 2.5% solution of Na₃NTA did not cause gross or histological abnormalities.

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Eyes: Trisodium NTA was classified as irritating to the eyes

Ingestion

Acute Ingestion: The LD₅₀ in rats for Trisodium NTA range from 1100 to 3900 mg/kg.

Chronic Ingestion: Chronic Ingestion of NTA and its trisodium salt has been shown to cause kidney toxicity in rats and mice. In a 2-yr study, the NAOEL for kidney alterations was 0.03%

Sensitization: A 1% aqueous liquid detergent containing 20% Na₃NTA did not cause sensitization following repeated patch testing in human volunteers.

Carcinogenicity: Nitriloacetic acid (NTA) and its salts were determined to be “possibly carcinogenic to humans” (Group 2B) by IARC, a compound which “may reasonable be anticipated to be a human carcinogen” by NTP and “select carcinogen” by OSHA.

Teratogenicity/Embryotoxicity: NTA is not teratogenic and did not induce reproductive toxicity.

Mutagenicity: NTA and its 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 7.8mM.

Other Effects: Effects have been reported in rats from repeated exposure to Trisodium NTA or Trisodium NTA monohydrate in the diet or in drinking water and included Zinc retention, reduced growth rate, urinary calcium excretion in the form of CaNaNTA crystals, increased urinary calcium, increased urinary pH, haematuria, elevated blood and urine glucose levels and an increase in red blood cell count.

Target Organs: Kidney and bladder

12. Ecological Information

Ecotoxicity: Trisodium NTA has a low to moderate toxicity to fish:

Test/Species	Exposure/Duration	Test Results
Fish (freshwater)	96-h	LC ₅₀ = 98-5500 mg/L
Daphnia magna	48-h	EC ₅₀ = 560-1000mg/L
Algae (growth inhibition test)	96-h	EC ₅₀ = 133-1000 mg/L

Biodegradation/Chemical Fate: This product is readily biodegradable under aerobic conditions in several OECD test guidelines and in the modified Zahn-Wellens test and Sturm test. In aerated sewage lagoon, the breakdown of trisodium NTA was temperature dependent: 93% at 15°C, 47% at 5°C and 22.5% at 0.5°C.

Other Information: Trisodium NTA is not likely to bioaccumulate (Low Pow = -2.62). Hydrolysis is not expected since NTA lacks the functional groups capable of hydrolysis. It is not expected to undergo photolysis due to lack of UV absorption. NTA is not expected to volatilize from soil and water surfaces but should have high mobility in soil.

13. Disposal Considerations

Waste Disposal: In its unused condition, this product would be considered a RCRA-defined hazardous waste by its characteristic of corrosivity. 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. NOTE – State and local regulations may be more stringent than federal regulations.

Container Disposal: 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

US DOT: UN3267, Corrosive liquid, basic, organic, n.o.s., (contains Trisodium nitriloacetic acid, sodium hydroxide), 8, PG III

IMDG: UN3267, Corrosive liquid, basic, organic, n.o.s., (contains Trisodium nitriloacetic acid, sodium hydroxide), 8, PG III



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IATA: UN3267, Corrosive liquid, basic, organic, n.o.s., (contains Trisodium nitriloacetic acid, sodium hydroxide), 8, PG III

Canada – TDG: UN3267, Corrosive liquid, basic, organic, n.o.s., (contains Trisodium nitriloacetic acid, sodium hydroxide), 8, PG III

Environmentally Hazardous Substances (49 CFR 172.101, Appendix A): Sodium Hydroxide, RQ = 1000 lbs

15. Regulatory Information

Chemical Name	CAA	CERCLA	IARC	US State Right-to Know Lists	CA Prop 65	SARA
Trisodium NTA	N/R	N/R	Listed (Group 2B)	MA	Listed	N/R
Sodium Hydroxide	N/R	Listed	N/R	CA/FL/IL/MA/MN/NJ/PA/RI	N/R	N/R
Water	N/R	N/R	N/R	N/R	N/R	N/R

Substance Name	US TSCA	Canada		EU EINECS
		DSL	NDSL	
Trisodium NTA	Listed	Listed	Not Listed	Listed
Sodium Hydroxide	Listed	Listed	Not Listed	Listed
Water	Listed	Listed	Not Listed	Listed

16. Other Information

Disclaimer:

NOTICE: We believe that the information contained on this Material Safety Data Sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily either all-inclusive or fully adequate in every circumstance. Also, these suggestions should not be confused with or followed in violation of applicable laws, regulation, rules or insurance requirements. **NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.**

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