

Safety Data Sheet

According to Regulation (EC) No. 1907/2006
OSHA Regulation 29 CFR 1910.1200
Canadian Regulation SOR/88-66

Revision Date: 2014-02-05

Reason for Revision: Regulation (EC) No. 1272/2008 Compliance, Updated Section 2 and 3.

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 3896-N Nitrate Reagent

Additional Product Codes: HI 3896-N

Application: Determination of Nitrate in Soil (Extract) Samples

Company Information (USA):

Hanna Instruments, Inc.
584 Park East Dr, Woonsocket, Rhode Island, USA 02895

Technical Service Contact Information:

1-800-426-6287 (8:30AM - 5:00PM ET)
+1-401-766-4260 (8:30AM - 5:00PM ET)

USA Emergency Contact Information:

1-800-424-9300 (Chemtrec 24Hr. Emergency)

International Emergency Contact Information:

+1-703-527-3887 (Chemtrec 24Hr. Emergency)

E-mail Address:

tech@hannainst.com

SECTION 2: HAZARD IDENTIFICATION

Causes severe skin burns and eye damage. Harmful to aquatic life with long-lasting effects.

According to Regulation (EC) No. 1272/2008:

Classification: Skin Corrosion (Category 1B)
Chronic Aquatic Toxicity (Category 3)

Signal Word: **Danger**

Pictograms:



Hazard Statements: H314: Causes severe skin burns and eye damage.
H412: Harmful to aquatic life with long-lasting effects.

Precaution Statements: P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

According to Directives 67/548/EEC and 1999/45/EC:

Symbol: Xi: Irritant

R-phrases: 36/37/38-52/53: Irritating to eyes, respiratory system, and skin. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases: 22-24/25: Do not breathe dust. Avoid contact with skin and eyes.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component:	EC No:	CAS No:	Hazard Class:	Phrases:	Concentration:
Potassium disulfate	232-216-8	7790-62-7	Skin Corr. 1B C	H314 R: 34	> 5% - < 10%
Citric acid monohydrate	-	5949-29-1	Eye Irrit. 2 Xi	H319 R: 36	> 10% - < 20%
Zinc powder	231-175-3	7440-66-6	Acute Aquatic 1 Chronic Aquatic 1 N	H400, H410 R: 50/53	> 0.1% - < 1.0%

Safety Data SheetAccording to Regulation (EC) No. 1907/2006
OSHA Regulation 29 CFR 1910.1200
Canadian Regulation SOR/88-66**SECTION 4: FIRST AID MEASURES**

- After Inhalation:** Remove to fresh air. Call in physician.
- After Skin Contact:** Wash affected area with plenty of water. Immediately remove contaminated clothing.
- After Eye Contact:** Rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Immediately call in ophthalmologist.
- After Swallowing:** Make victim drink plenty of water (if necessary several liters). Immediately call in physician.
- General Information:** Remove contaminated, soaked clothing immediately and dispose of safely.

SECTION 5: FIRE-FIGHTING MEASURES

- Suitable Extinguishing Media:**
Foam, Dry Powder, Carbon Dioxide
- Special Risks:**
Non-combustible. Development of hazardous combustion gases possible in the event of fire.
- Special Protective Equipment:**
Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.
- Additional Information:**
NA

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Personal Precautions:**
Avoid substance contact. Do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
- Environmental Precautions:**
Do not discharge into the drains/surface waters/groundwater.
- Additional Notes:**
Take up dry. Forward for disposal.

SECTION 7: HANDLING AND STORAGE

- | | |
|--|---|
| Handling: | Storage: |
| Work under hood. Do not inhale substance. Avoid generation of dusts. | Tightly closed. In a well ventilated place. Store at room temperature (+15 to +25°C recommended). |

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

- Engineering:**
Maintain general industrial hygiene practice.
- Personal Protective Equipment:**
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.
- | | | |
|---|---------------------------|------------------------|
| Respiratory Protection: | Protective Gloves: | Eye Protection: |
| Required when dusts are generated. Work under hood. | Rubber or plastic | Goggles or face mask |
- Industrial Hygiene:**
Change contaminated clothing. Wash hands after working with substance.

Safety Data SheetAccording to Regulation (EC) No. 1907/2006
OSHA Regulation 29 CFR 1910.1200
Canadian Regulation SOR/88-66**SECTION 9: PHYSICAL/CHEMICAL PROPERTIES**

Appearance:	White powder	Odor:	Odorless	Density at 20°C:	NA
Melting Point:	ND	Boiling Point:	ND	Solubility:	Soluble
pH at 20°C:	2.30 @ 10 g/L	Explosion Limit:	NA	Flash Point:	NA
Thermal Decomp.:	NA				

SECTION 10: STABILITY AND REACTIVITY**Conditions to be Avoided:**

Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Not available

Hazardous Decomposition Products:

No information available.

Substances to be Avoided:

Metals, oxidizing agents, reducing agents

SECTION 11: TOXICOLOGICAL INFORMATION**Product Toxicity**

Quantitative data on the toxicity of this product is not available.

Potential Health Effects:**Inhalation:** Causes burns.**Skin Contact:** Causes burns.**Eye Contact:** Causes burns.**Ingestion:** Irritations of mucous membranes (stomach), coughing, pain, bloody vomiting.**Further Data:** The product should be handled with the usual care when dealing with chemicals.**Component Toxicity****Acute Toxicity:**

Not Available

Chronic Toxicity:

Not Available

Additional Data:

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Citric acid monohydrate – as the pure substance

Acute toxicity

LD 50 (oral, rat): 3000 mg/kg (anhydrous substance).

Subacute to chronic toxicity

Bacterial mutagenicity: Ames test: negative.

No teratogenic effects in animal experiments.

No impairment of reproductive performance in animal experiments.

Safety Data Sheet

According to Regulation (EC) No. 1907/2006
OSHA Regulation 29 CFR 1910.1200
Canadian Regulation SOR/88-66

SECTION 12: ECOLOGICAL INFORMATION

Quantitative data on the ecological effect of this product is not available.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Citric acid monohydrate – as the pure substance

Biologic degradation:

Biodegradation: >98 % /2 d Zahn-Wellens test;

Easily eliminable.

Behavior in environmental compartments:

Distribution: log p(o/w): -1.72 (20 °C) (anhydrous substance);

No bioaccumulation is to be expected (log P(o/w) <1).

Ecotoxic effects:

Biological effects:

Harmful effect due to pH shift.

Fish toxicity: *L.idus* LC50 : 440–760 mg/L /96 h (anhydrous substance).

Daphnia toxicity: *Daphnia magna* EC50 : ~120 mg/L /72 h (anhydrous substance).

Maximum permissible toxic concentration:

Protozoa: *E.sulcatum* EC5 : 485 mg/L /72 h (anhydrous substance).

Bacterial toxicity: *Ps.putida* EC5 : >10000 mg/L /16 h (anhydrous substance); *M.aeruginosa* EC5 : 80 mg/L /8 d (anhydrous substance). Algal

toxicity: *Sc.quadricauda* IC5 : 640 mg/L /7 d (anhydrous substance).

Further ecologic data:

Degradability:

BOD5 : 0.481 g/g; TOD: 0.686 g/g; COD: 0.685 g/g.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice. Handle contaminated packaging in the same way as the substance itself.

SECTION 14: TRANSPORTATION INFORMATION

Land:

Not subject to transport regulations

Sea:

Not subject to transport regulations

Air:

Not subject to transport regulations

SECTION 15: REGULATORY INFORMATION

Complies with European Regulations (EC) No. 1907/2006 and No. 1272/2008.

Complies with European Council Directives 67/548/EEC and 1999/45/EC.

Complies with OSHA Regulation 29 CFR 1910.1200.

Complies with Canadian Regulation SOR/88-66

SECTION 16: OTHER INFORMATION

Text of phrases under Section 3

H314: Causes severe skin burns and eye damage.

H319: Causes serious eye irritation.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long-lasting effects.

R34: Causes burns.

R36: Irritating to eyes.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Revision Information

Revision Date: 2014-02-05

Supersedes edition of: 2012-06-01

Reason for revision: Regulation (EC) No. 1272/2008 Compliance, Updated Section 2 and 3.

Legend

NA: Not Applicable

ND: Not Determined

THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF THE PROPERTIES OF THE PRODUCT.