

Revision Date: 2009-06-10
Reason for Revision: 29 CFR 1910.1200 and SOR/88-66 Compliance

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 3815-0 Mercuric Nitrate Solution
Application: Determination of Chloride in Water 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

Toxic by inhalation, in contact with skin and if swallowed. Danger of cumulative effects. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component: Mercury (II) Nitrate Monohydrate
EC-No.: 233-152-3
CAS-No.: 7783-34-8
Hazard: T+, N
Phrases: R: 26/27/28-33-50/53
Content: > 0.5 - < 2%

SECTION 4: FIRST AID MEASURES

After Inhalation: Remove to fresh air. Summon doctor.
After Skin Contact: Wash affected area with water and soap. Immediately remove contaminated clothing.
After Eye Contact: Rinse out immediately with plenty of water and seek medical advice.
After Swallowing: If victim is still conscious, make him drink plenty of water, induce vomiting, administer activated charcoal (20 - 40 g in 10% slurry). Immediately call in physician.
General Information: Remove contaminated, soaked clothing immediately and dispose of safely.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam.

Special Risks:

Non-combustible. Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in event of fire:
 Nitrous Gases, Mercury Vapors

Special Protective Equipment:

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus

Additional Information:

Product itself is non-combustible. Cool container with spray water from a safe distance. Contain escaping vapors with water. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Take up with liquid-absorbent material. Clean up affected area and dispose according to local regulation.

Environmental Precautions:

Do not discharge into the drains/surface waters/groundwater.

Additional Notes:

Render harmless: neutralize with diluted sodium hydroxide solution or by throwing on lime, lime sand, or sodium carbonate.

SECTION 7: HANDLING AND STORAGE

Handling:

Avoid generation of vapors/aerosols. Work under hood.
 Do not inhale substance.

Storage:

Tightly closed. In a well-ventilated place at +15 to +25 °C. Protect from light. Accessible only for authorized persons.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	Value	Source	Type	Value	Source
Mercury(II) Nitrate Monohydrate					
TWA (8hr)	0.025 mg (Hg)/m ³	Belgium	TWA (8hr)	0.025 mg (Hg)/m ³	Canada (Ontario)
TWA (8hr)	0.025 mg (Hg)/m ³	Canada (Quebec)	TWA (8hr)	0.1 mg (Hg)/m ³	France
TWA (8hr)	0.1 mg (Hg)/m ³	Germany	TWA (8hr)	0.1 mg (Hg)/m ³	Greece
TWA (8hr)	0.08 mg (Hg)/m ³	Hungary	TWA (8hr)	0.05 mg (Hg)/m ³	Poland
TWA (8hr)	0.025 mg (Hg)/m ³	Portugal	TWA (8hr)	0.025 mg (Hg)/m ³	Spain
TWA (8hr)	0.01 mg (Hg)/m ³	UK	TWA (8hr)	0.025 mg (Hg)/m ³	USA (ACGIH)
TWA (8hr)	2 mg (Hg)/m ³	USA (OSHA)			

Engineering:

Safety shower and eye wash.

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:

Required when vapors/aerosols are generated. Work under hood.

Protective Gloves:

Rubber or plastic

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Immediately change contaminated clothing and immerse in water. Apply skin-protective barrier cream. Wash hands and face after working with substance. Work under hood. Do not inhale substance. Avoid generation of vapors/aerosols. Under no circumstances eat or drink at workplace.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance: Colorless liquid	Odor: Odorless	Density at 20° C: 1.02 g/cm ³
Melting Point: NA	Boiling Point: ND	Solubility: Soluble
pH at 20° C: < 1.0	Explosion Limit: NA	Flash Point: NA
Thermal Decomp.: NA		

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Strong Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Not available

Hazardous Decomposition Products:

In the event of fire: See section 5.

Substances to be Avoided:

Strong reducing agents

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

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

Potential Health Effects:

Inhalation: After inhalation of aerosols: damage to the affected mucous membranes.

Skin Contact: Danger of skin absorption.

Eye Contact: Corneal lesion.

Ingestion: Severe pain (risk of perforation!), nausea, vomiting and diarrhea.

Further Data: The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Mercury(II) Nitrate Monohydrate

LD50: Oral - Rat - 26 mg/kg

LD50: Dermal - Rat - 75 mg/kg

Chronic Toxicity:

Not Available

Additional Data:

APPLICABLE TO MAIN COMPONENT:

The following applies to Mercury (II) nitrate monohydrate, as the pure substance:

Further toxicological information

After skin contact: Danger of skin absorption.

Danger of cumulative effects.

Other notes:

Mercury compounds have a cytotoxic and protoplasmatoxic effect. Intoxication symptoms: acute: contact with eye causes severe lesions. Swallowing and inhalation of dusts damages mucous membranes of gastrointestinal and respiratory tract (metallic taste, nausea, vomiting, abdominal pain, bloody diarrhoea, intestinal burns, glottal oedema, aspiration pneumonia); drop in blood pressure, cardiac dysrhythmia, circulatory collapse, and renal failure; chronic: inflammation of the mouth with loss of teeth and mercurial line. The principal signs manifest themselves in the CNS (impaired speech, vision, hearing, and sensitivity, loss of memory, irritability, hallucinations, delirium inter alia).

The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities.

SECTION 12: ECOLOGICAL INFORMATION

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

APPLICABLE TO MAIN COMPONENT:
 The following applies to Mercury (II) nitrate monohydrate, as the pure substance:
 Behavior in environmental compartments:
 Distribution: log p(o/w): -0.51 (anhydrous substance).
 No bioaccumulation is to be expected (log P(o/w) <1).
 Ecotoxic effects:
 Biological effects:
 Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.
 Fish toxicity: P.promelas LC50 : 0.17 mg/L /96 h (anhydrous substance).
 Further ecologic data:
 The following applies to nitrates in general: may contribute to the eutrophication of water supplies.
 Hazard for drinking water. Fish: LC50 > 500 mg/L.

Further Data: DO NOT ALLOW TO ENTER WATERS, WASTE WATERS, OR SOIL!

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:	Sea:	Air:
ADR/RID: 9/PG II/ UN3316 Name: CHEMICAL KIT	IMDG: 9/PG II/ UN3316 Name: CHEMICAL KIT Marine pollutant: yes	ICAO/IATA: 9/PG II/ UN3316 Name: CHEMICAL KIT

Transport data applies to the COMPLETE KIT!

SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:

Symbol: T: Toxic

R-phrases: 23/24/25-33-52/53: Toxic by inhalation, in contact with skin and if swallowed. Danger of cumulative effects. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases: 28.1-36/37-45-61: After contact with skin, wash immediately with plenty of water. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/Safety data sheets.

Contains: Mercury (II) nitrate monohydrate

SECTION 16: OTHER INFORMATION

Text of R-phrases under Section 3	Revision Information	Legend
26/27/28: Very toxic by inhalation, in contact with skin and if swallowed.	Revision Date: 2009-06-10	NA: Not Applicable
33 :Danger of cumulative effects.	Supersedes edition of: 2008-12-01	ND: Not Determined
50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	Reason for revision: 29 CFR 1910.1200 and SOR/88-66 Compliance	

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.