

# Safety Data Sheet

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

**Revision Date:** 2012-05-21  
**Reason for Revision:** Section 14 Updated

## **SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY**

**Product Name:** HI 93728-0 Nitrate Reagent

**Additional Product Codes:** HI 93728-01  
HI 93728-03

**Application:** Determination of Nitrate 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. May cause sensitisation by skin contact. May cause cancer. Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of irreversible effects.

## **SECTION 3: COMPOSITION AND COMPONENT INFORMATION**

<b>Component:</b>	Sulfanilic Acid	Cadmium Powder	Copper Sulfate
<b>EC-No.:</b>	204-482-5	231-152-8	231-847-6
<b>CAS-No.:</b>	121-57-3	7440-43-9	7758-99-8
<b>Hazard:</b>	Xi	T+, N, Carc. Cat.2, Muta. Cat. 3, Repr. Cat. 3	N, Xn, Xi
<b>Phrases:</b>	R: 36/38-43	R: 26-45-48/23/25-50/53-62-63-68	R: 22-36/38-50/53
<b>Content:</b>	> 1% - < 10%	1% - < 7%	> 0.1% - < 1%

## **SECTION 4: FIRST AID MEASURES**

<b>After Inhalation:</b>	Remove to fresh air. Give oxygen if breathing is difficult. If pain persists, summon medical advice.
<b>After Skin Contact:</b>	Wash affected area with plenty of water. Remove contaminated clothing.
<b>After Eye Contact:</b>	Rinse out with plenty of water. If pain persists, summon medical advice.
<b>After Swallowing:</b>	Wash out mouth thoroughly with water, if person is conscious. Immediately obtain medical attention.
<b>General Information:</b>	Remove contaminated, soaked clothing immediately and dispose of safely.

**Safety Data Sheet**

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

**SECTION 5: FIRE-FIGHTING MEASURES*****Suitable Extinguishing Media:***

Carbon Dioxide, Dry Chemical Powder

***Special Risks:***

Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in event of fire: Sulfur Oxides, Nitrogen Oxides

***Special Protective Equipment:***

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

***Additional Information:***

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or groundwater.

**SECTION 6: ACCIDENTAL RELEASE MEASURES*****Personal Precautions:***

Avoid substance contact. Avoid inhalation of dusts in all circumstances.

***Environmental Precautions:***

Do not allow to enter sewerage system.

***Additional Notes:***

Take up dry. Forward for disposal. Clean up affected area. Avoid generation of dusts.

**SECTION 7: HANDLING AND STORAGE*****Handling:***

Avoid generation of dusts. Do not inhale substance.  
Accessible only for authorized persons.

***Storage:***

Store at room temperature (+15 to +25 °C). Tightly closed in a dry and well-ventilated place. Protect from moisture.

# Safety Data Sheet

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

## SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	Value	Source	Type	Value	Source
<b>Cadmium Powder</b>					
TWA (8hr)	0.010 mg/m <sup>3</sup> (inhalable)	Belgium	TWA (8hr)	0.01 mg/m <sup>3</sup>	Canada (Ontario)
TWA (8hr)	0.025 mg/m <sup>3</sup>	Canada (Quebec)	TWA (8hr)	0.050 mg/m <sup>3</sup>	France
TWA (8hr)	0.025 mg/m <sup>3</sup>	Greece	TWA (8hr)	0.015 mg/m <sup>3</sup>	Hungary
TWA (8hr)	0.010 mg/m <sup>3</sup>	Poland	TWA (8hr)	0.010 mg/m <sup>3</sup>	Portugal
TWA (8hr)	0.050 mg/m <sup>3</sup>	Romania	TWA (8hr)	0.002 mg/m <sup>3</sup> (respirable)	Spain
TWA (8hr)	0.025 mg/m <sup>3</sup>	UK	TWA (8hr)	0.010 mg/m <sup>3</sup>	USA (ACGIH)
TWA (8hr)	0.005 mg/m <sup>3</sup>	USA (OSHA)			

### Copper Sulfate Pentahydrate

TWA (8hr)	0.1 mg (Cu)/m <sup>3</sup> (inhalable dust)	Netherlands
-----------	--	-------------

#### 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:

Required when dusts are generated. Work under hood.

#### Protective Gloves:

Rubber or plastic

#### Eye Protection:

Goggles or face mask

#### Industrial Hygiene:

Change contaminated clothing. Application of skin-protective barrier cream recommended. Wash hands after working with substance. Avoid generation of dusts. Under no circumstances eat or drink at workplace.

## SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

<b>Appearance:</b>	Grey powder	<b>Odor:</b>	Odorless	<b>Density at 20°C:</b>	ND
<b>Melting Point:</b>	ND	<b>Boiling Point:</b>	NA	<b>Solubility:</b>	Partially soluble
<b>pH at 20°C:</b>	3.1 at 6 g/L	<b>Explosion Limit:</b>	NA	<b>Flash Point:</b>	NA
<b>Thermal Decomp.:</b>	NA				

## SECTION 10: STABILITY AND REACTIVITY

#### Conditions to be Avoided:

Strong Heating

#### Hazardous Polymerization:

Will not occur.

#### Further Information:

Not available

#### Hazardous Decomposition Products:

Toxic gases or vapors in the event of fire.

#### Substances to be Avoided:

Oxidizing agents, acids

# Safety Data Sheet

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

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **Product Toxicity**

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

### **Potential Health Effects:**

- Inhalation:** Irritation symptoms in the respiratory tract.  
**Skin Contact:** Slight irritations. May cause sensitization.  
**Eye Contact:** Slight irritations.  
**Ingestion:** Nausea, vomiting, diarrhea.  
**Further Data:** Systemic effects: after absorption of large quantities: tiredness, agitation, spasms, ataxia, drop in temperature. further hazardous properties cannot be excluded. The product should be handled with particular care.

### **Component Toxicity**

#### **Acute Toxicity:**

##### **Cadmium Powder**

**LC50:** Inhalation - Rat - 25 mg/m<sup>3</sup>

**LD50:** Oral - Rat - 225 mg/kg

##### **Copper Sulfate Pentahydrate**

**LD50:** Oral - Rat - 300 mg/kg

##### **Sulfanilic Acid**

**LD50:** Oral - Rat - 12300 mg/kg

#### **Chronic Toxicity:**

##### **Cadmium Powder**

OSHA: Cancer Hazard

NTP: Known to be carcinogenic to humans

IARC Group 1: Carcinogenic to humans

#### **Additional Data:**

Not Available

## **SECTION 12: ECOLOGICAL INFORMATION**

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

Biological effects:

APPLICABLE TO PARTIAL COMPONENT:

The following applies to cadmium compounds in general: degradability: biodegradability 0; biological effects: fish: *L. macrochirus* 96 h. LDLo: 1.94 mg/L; *C. auratus* 8.5 h. toxic as from 0.0165 mg/L; bacteria: *E. coli* toxic as from 0.15 mg/L; arthropods: *Daphnia* toxic as from 0.1 mg/L; *Daphnia magna* toxic as from 0.0026 mg/L; protozoa: toxic as from 0.2 mg/L; algae: *Sc. quadricauda* toxic as from 0.1 mg/L; hazard for drinking water.

**Further Data:** APPLICABLE TO PARTIAL COMPONENT:  
May contribute to the eutrophication of drinking-water supplies. 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**

	<b>Land (ADR/RID):</b>	<b>Sea (IMDG):</b>	<b>Air (ICAO/IATA):</b>
<b>UN No.:</b>	3288	3288	3288
<b>Proper Shipping Name:</b>	Toxic solid, inorganic, n.o.s. (cadmium mixture)	Toxic solid, inorganic, n.o.s. (cadmium mixture)	Toxic solid, inorganic, n.o.s. (cadmium mixture)
<b>Class (Sub Risk):</b>	6.1	6.1	6.1
<b>Packing Group:</b>	II	II	II

# Safety Data Sheet

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

## **SECTION 15: REGULATORY INFORMATION**

### ***Labeling according to EC Directives:***

- Symbol:** T: Very Toxic  
 N: Dangerous for the environment
- R-phrases:** 23-43-45-48/23/25-51/53-68: Toxic by inhalation. May cause sensitisation by skin contact. May cause cancer. Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of irreversible effects.
- S-phrases:** 36/37-45-53-60-61: Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). Avoid exposure - obtain special instruction before use. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions / Safety data sheets.
- Contains:** Sulfanilic acid, Cadmium powder

## **SECTION 16: OTHER INFORMATION**

### ***Text of R-phrases under Section 3***

22: Harmful if swallowed.  
 26: Very toxic by inhalation.  
 36/38: Irritating to eyes and skin.  
 43: May cause sensitization by skin contact.  
 45: May cause cancer.  
 48/23/25: Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.  
 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 62: Possible risk of impaired fertility.  
 63: Possible risk of harm to the unborn child.  
 68: Possible risk of irreversible effects.

### ***Revision Information***

**Revision Date:** 2012-05-21  
**Supersedes edition of:** 2009-06-10  
**Reason for revision:** Section 14 Updated

### ***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.**