

**Revision Date:** 2013-07-16  
**Reason for Revision:** Regulation (EC) No. 1272/2008 Compliance

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

**Product Name:** HI 93701-0 Free Chlorine Reagent  
**Application:** Determination of Chlorine 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

**Additional Product Codes:** HI 93701-01  
HI 93701-03  
HI 38018-200

**SECTION 2: HAZARD IDENTIFICATION**

Non-hazardous product as specified in Directives 67/548/EEC and 1999/45/EC.  
Non-hazardous product as specified in OSHA Regulation 29 CFR 1910.1200.  
Non-hazardous product as specified in Canadian Regulation SOR/88-66.  
Non-hazardous product as specified in Regulation (EC) 1272/2008.

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

**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:
N,N-Diethyl-1,4-phenylenediammonium sulfate	228-500-6	6283-63-2	Acute Tox. 4 Xn	H302, H312 R: 21/22	> 1% - < 10%

**SECTION 4: FIRST AID MEASURES**

**After Inhalation:** Remove to fresh air. Obtain medical attention if feeling unwell.  
**After Skin Contact:** Wash affected area with plenty of water. Remove contaminated clothing.  
**After Eye Contact:** Rinse out with plenty of water. If pain persists, summon medical advice.  
**After Swallowing:** Drink plenty of water, induce vomiting. Obtain medical attention.  
**General Information:** Not available

**SECTION 5: FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media:**  
Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam.

**Special Risks:**  
Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in event of fire: Nitrous Gases, Sulfur 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 generation of dusts. Do not inhale dusts. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

**Environmental Precautions:**

NA

**Additional Notes:**

Take up dry. Clean up affected area and dispose according to local regulation.

**SECTION 7: HANDLING AND STORAGE**

**Handling:**

Avoid generation of dusts. Do not inhale substance.

**Storage:**

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

**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:**

Required when dusts are generated. Work under hood.

**Protective Gloves:**

Rubber or plastic

**Eye Protection:**

Goggles or face mask

**Industrial Hygiene:**

Change contaminated clothing. Wash hands after working with substance.

**SECTION 9: PHYSICAL/CHEMICAL PROPERTIES**

<b>Appearance:</b>	White powder	<b>Odor:</b>	Odorless	<b>Density at 20°C:</b>	ND
<b>Melting Point:</b>	NA (decomposition)	<b>Boiling Point:</b>	NA	<b>Solubility:</b>	Soluble
<b>pH at 20°C:</b>	6.0 – 6.5 at 10 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, light exposition.

**Hazardous Polymerization:**

Will not occur.

**Further Information:**

Not available

**Hazardous Decomposition Products:**

In the event of fire: See section 5.

**Substances to be Avoided:**

Alkali metals, ammonia, halogen-halogen compounds, fluorine, hydrogen peroxide, strong oxidizing agents

### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### **Product Toxicity**

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

#### **Potential Health Effects:**

**Inhalation:** Possible symptoms are: respiratory tract irritations.

**Skin Contact:** Slight irritations. Sensitization with allergic manifestations possible in predisposed persons. Skin absorption of some components.

**Eye Contact:** Slight irritations.

**Further Data:** The following applies to aromatic amines in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea and spasms; principal symptom: cyanosis (blue discoloration of the blood). The product should be handled with the usual care when dealing with chemicals.

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#### **Component Toxicity**

##### **Acute Toxicity:**

Not Available

##### **Chronic Toxicity:**

Not Available

#### **Additional Data:**

APPLICABLE TO MAIN COMPONENT:

The following apply to N, N-Diethylaniline-1,4-phenylenediammonium sulfate as the pure substance:

Acute toxicity

LD50 (oral, rat): 497 mg/kg.

Specific symptoms in animal studies:

Eye irritation test (rabbit): Slight irritations.

### **SECTION 12: ECOLOGICAL INFORMATION**

Quantitative data on the ecological effect of this product is not available. A harmful effect on aquatic organisms cannot be excluded in the event of improper handling or disposal.

**Further Data:** Depending on the concentration, it may contribute to the eutrophication of water supplies. No ecological problems are to be expected when the product is handled and used with due care and attention

### **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***

H302: Harmful if swallowed.  
H312: Harmful in contact with skin.  
R21/22: Harmful in contact with skin and if swallowed.

***Revision Information***

**Revision Date:** 2013-07-16  
**Supersedes edition of:** 2012-06-01  
**Reason for revision:** Regulation (EC) No. 1272/2008  
Compliance

***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.**