

## Material Safety Data Sheet

Version 5.0

Revision Date 11/30/2012

Print Date 10/25/2013

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Zinc atomic absorption standard solution

Product Number : 207667

Brand : Aldrich

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

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2. HAZARDS IDENTIFICATION

## Emergency Overview

## OSHA Hazards

Toxic by inhalation., Harmful by ingestion., Corrosive

## GHS Classification

Skin irritation (Category 2)

Eye irritation (Category 2A)

## GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H315

Causes skin irritation.

H319

Causes serious eye irritation.

Precautionary statement(s)

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## HMIS Classification

Health hazard: 3

Flammability: 0

Physical hazards: 0

## NFPA Rating

Health hazard: 3

Fire: 0

Reactivity Hazard: 0

## Potential Health Effects

## Inhalation

Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin**  
**Eyes**  
**Ingestion**

Harmful if absorbed through skin. Causes skin burns.  
Causes eye burns.  
Harmful if swallowed.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component		Classification	Concentration
<b>Hydrochloric acid</b>			
CAS-No.	7647-01-0	Skin Corr. 1B; STOT SE 3; H314, H335	1 - 5 %
EC-No.	231-595-7		
Index-No.	017-002-01-X		

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

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### 4. FIRST AID MEASURES

#### **General advice**

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

#### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### **In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

#### **In case of eye contact**

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### **If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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### 5. FIREFIGHTING MEASURES

#### **Conditions of flammability**

Not flammable or combustible.

#### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### **Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

#### **Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas

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### 6. ACCIDENTAL RELEASE MEASURES

#### **Personal precautions**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

#### **Environmental precautions**

Do not let product enter drains.

#### **Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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### 7. HANDLING AND STORAGE

#### **Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

#### **Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Handle and open container with care.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Hydrochloric acid	7647-01-0	C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper Respiratory Tract irritation Not classifiable as a human carcinogen			
		C	5 ppm 7 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate. Ceiling limit is to be determined from breathing-zone air samples.			
		C	5 ppm 7 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		C	5 ppm 7 mg/m3	USA. NIOSH Recommended Exposure Limits
	Often used in an aqueous solution.			

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	liquid
Colour	no data available

### Safety data

pH	no data available
Melting point/freezing point	no data available
Boiling point	no data available
Flash point	no data available

Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	1.010 g/cm <sup>3</sup>
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapor density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Strong bases, Acids, Bases, Alkali metals, Metals, Amines, permanganates, e.g. potassium permanganate, Fluorine, chlorides, hexalithium disilicide, Nitrates, Carbon disulfide

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

no data available

#### Inhalation LC50

no data available

#### Dermal LD50

no data available

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

Eyes: no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### **Carcinogenicity**

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### **Reproductive toxicity**

no data available

### **Teratogenicity**

no data available

### **Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

### **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

### **Aspiration hazard**

no data available

### **Potential health effects**

<b>Inhalation</b>	Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Ingestion</b>	Harmful if swallowed.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns.

### **Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### **Synergistic effects**

no data available

### **Additional Information**

RTECS: Not available

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## **12. ECOLOGICAL INFORMATION**

### **Toxicity**

no data available

### **Persistence and degradability**

no data available

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

### **PBT and vPvB assessment**

no data available

### **Other adverse effects**

no data available

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## **13. DISPOSAL CONSIDERATIONS**

**Product**

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

UN number: 1789 Class: 8 Packing group: III

Proper shipping name: Hydrochloric acid

Marine Pollutant: No

Poison Inhalation Hazard: No

**IMDG**

UN number: 1789 Class: 8 Packing group: III EMS-No: F-A, S-B

Proper shipping name: HYDROCHLORIC ACID

Marine Pollutant: No

**IATA**

UN number: 1789 Class: 8 Packing group: III

Proper shipping name: Hydrochloric acid

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**15. REGULATORY INFORMATION****OSHA Hazards**

Toxic by inhalation., Harmful by ingestion., Corrosive

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Hydrochloric acid	7647-01-0	1993-04-24

**SARA 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
Hydrochloric acid	7647-01-0	1993-04-24

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Hydrochloric acid	7647-01-0	1993-04-24
Water	7732-18-5	

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Hydrochloric acid	7647-01-0	1993-04-24
Water	7732-18-5	

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION****Text of H-code(s) and R-phrase(s) mentioned in Section 3**

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure

**Further information**

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