Material Safety Data Sheet

100 ppm Iron in 0.1 N Sulfuric Acid Solution

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1. Product Identification

Synonyms:	CA-6 Analyzer Iron Calibration Solution
CAS No.:	Not applicable to mixtures.
Molecular Weight:	Not applicable to mixtures.
Chemical Formula:	Not applicable to mixtures.
Product Codes:	ECD P/N 2010007-1
Manufacture By:	Electro-Chemical Devices, Inc.
	1681 Kettering
	Irvine, CA 92614
Phone:	(800) 729-1333

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2. Hazards Identification

Emergency Overview

OSHA Hazards

No known OSHA hazards

Not a dangerous substance according to GHS.

NFPA Rating

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed.

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3. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sulfuric Acid	7664-93-9	0.1-1 % w/v	No
Ferrous ammonium sulfate 6 hydrate	7783-85-9	0.01%	No
Water	7732-18-5	Balance	No

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4. First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Consult physician

Skin Contact: Wash with soap and water

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water.

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5. Fire Fighting Measures

Flammability of the Product: Non–flammable

Auto–ignition Temperature: Not applicable

Flash Points: Not applicable

Flammable Limits: Not applicable

Products of Combustion: Hazardous decomposition products formed under fire conditions. Sulfur oxides, Iron oxides

Fire Hazards: Not applicable

Explosion Hazards: Static Discharge: None

Mechanical Impact: None

Fire Fighting Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Protective Clothing: Wear self-contained breathing apparatus for firefighting if necessary

Special Remarks: None

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6. Accidental Release Measures

Personal precautions

Avoid breathing vapors, mist or gas.

Environmental precautions

No special environmental precautions required.

Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

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7. Handling and Storage

Handling: Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Storage: Store in a cool, dry, well ventilated place. Store in a tightly closed container

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8. Exposure Controls/Personal Protection

Components	CAS No.	Value	Control Parameters	Basis
Sulfuric Acid	7664-93-9	TWA	0.2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	1 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants -1910.1000
		TWA	1 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

Personal protective equipment

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN

14387) respirator cartridges. 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.

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Choose 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

General industrial hygiene practice

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9. Physical and Chemical Properties

Appearance:

Clear, liquid.

Odor:

Odorless.

Solubility:

Complete (100%)

Specific Gravity:

1.005 g/ml, water = 1

pH:

Acidic, pH < 1

% Volatiles by volume @ 21C (70F):

NA

Boiling Point:

100°C

Melting Point:

No information found.

Vapor Density (Air=1):

Not applicable.

Vapor Pressure (mm Hg):

Not applicable.

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10. Stability and Reactivity

Chemical Stability: Product is stable

Conditions to Avoid: none

Incompatibilities with Other Materials: Bases

Hazardous Decomposition Products:

Hazardous decomposition products formed under fire conditions. - Sulphur oxides. Other decomposition products - no data available. Hazardous decomposition products formed under fire conditions. – Nature of decomposition products not known.

Hazardous Polymerization: Has not been reported

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11. Toxicological Information

Toxicity: No data available

CARCINOGENIC EFFECTS:

IARC: 1 - Group 1: Carcinogenic to humans (Sulfuric acid)

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

NTP: Known to be human carcinogen (Sulfuric acid)

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

Acute Effects on Humans: Not available

Synergetic Products (Toxicologically): Not available.

Irritancy Draize Test: Not available

Sensitization: Not available

Toxicity to Reproductive System: Not available

Teratogenic Effects: Not available

Mutagenic Effects: Not available

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12. Ecological Information

Eco-toxicity: No data available

Environmental: No information available

Physical: No information available.

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13. Disposal Considerations

Treatment: No special considerations, observe all Federal, State and local laws when disposing of this solution.

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14. Transport Information

DOT (US)

DOT (US)

UN number: 3264 **Class**: 8 **Packing group**: III

Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid)

Reportable Quantity (RQ):

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Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 3264 Class: 8 Packing group: III EMS-No: F-A, S-B

Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulfuric acid)

Marine pollutant: No

IATA

UN number: 3264 Class: 8 Packing group: III

Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid)

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15. Regulatory Information

OSHA Hazards

No known OSHA hazards

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

Sulfuric acid

CAS-No. 7664-93-9

Revision Date 2007-07-01

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

Sulfuric acid: CAS-No. 7664-93-9 Revision Date 2007-07-01

Pennsylvania Right To Know Components

Sulfuric acid: CAS-No. 7664-93-9 Revision Date 2007-07-01

Water: CAS-No. 7732-18-5

New Jersey Right To Know Components

Sulfuric acid: CAS-No. 7664-93-9 Revision Date 2007-07-01

Water: CAS-No. 7732-18-5

California Prop. 65 Components

This product contains a chemical known to State of California to cause cancer.

Sulfuric acid: CAS-No. 7664-93-9 Revision Date 2007-07-01

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16. Other Information

Text of H-code(s) and R-phrase(s)

H314 Causes severe skin burns and eye damage.

Skin Corr. Skin corrosion

Label Hazard Warning:

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

Label Precautions:

None.

Label First Aid:

Not applicable.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS-2010007-1 rev. B Feb. 2015

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