### SIGMA-ALDRICH

**Material Safety Data Sheet**

**Version**: 3.1
**Revision Date**: 03/25/2009
**Print Date**: 08/12/2009

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**1. PRODUCT AND COMPANY IDENTIFICATION**

- **Product name**: Hydrazine sulfate salt
- **Product Number**: 216046
- **Brand**: Sigma-Aldrich
- **Company**: Sigma-Aldrich
  - 3050 Spruce Street
  - SAINT LOUIS MO 63103
  - USA
- **Telephone**: +1 800-325-5832
- **Fax**: +1 800-325-5052
- **Emergency Phone #**: (314) 776-5555

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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

- **Formula**: H₂N₂ · H₂SO₄
- **Molecular Weight**: 130.12 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>10034-50-2</td>
<td>233-110-4</td>
<td>207-014-00-6</td>
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</tbody>
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**3. HAZARDS IDENTIFICATION**

**Emergency Overview**
- **OSHA Hazards**: Target Organ Effect, Highly toxic by inhalation, Harmful by ingestion, Toxic by skin absorption, Skin sensitiser, Irritant, Carcinogen
- **Target Organs**: Nervous, Blood, Liver, Kidney, Lungs

**HMIS Classification**
- **Health Hazard**: 4
- **Chronic Health Hazard**: *
- **Flammability**: 0
- **Physical Hazards**: 0

**NFPA Rating**
- **Health Hazard**: 4
- **Fire**: 0
- **Reactivity Hazard**: 0

**Potential Health Effects**
- **Inhalation**: May be fatal if inhaled, Causes respiratory tract irritation.
- **Skin**: Toxic if absorbed through skin, Causes skin irritation.
- **Eyes**: Causes eye irritation.
- **Ingestion**: Harmful if swallowed.

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**4. FIRST AID MEASURES**

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

**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. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**
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. FIRE-FIGHTING MEASURES**

- **Flammable properties**
  - Flash point: not applicable
  - Ignition temperature: no data available

- **Suitable extinguishing media**
  - Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **Special protective equipment for fire-fighters**
  - Wear self-contained breathing apparatus for fire fighting if necessary.

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**6. ACCIDENTAL RELEASE MEASURES**

- **Personal precautions**
  - Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

- **Environmental precautions**
  - Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

- **Methods for cleaning up**
  - Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

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**7. HANDLING AND STORAGE**

- **Handling**
  - Avoid formation of dust and aerosols.
  - Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventative fire protection.

- **Storage**
  - Keep container tightly closed in a dry and well-ventilated place.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) 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.

Eye protection
Safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form solid

Safety data

pH 1.3 at 52 g/l
Melting point 254 °C (489 °F) - lit.
Boiling point no data available
Flash point not applicable
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Density 1.370 g/cm3
Water solubility no data available

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Conditions to avoid
Can violently decompose at elevated temperatures

Materials to avoid
Oxidizing agents, Bases

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - rat - 601 mg/kg

Irritation and corrosion
Eyes - rabbit - Moderate eye irritation - 24 h

Sensitisation
May cause allergic skin reaction.

Chronic exposure
This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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

NTP: Reasonably anticipated to be a human carcinogenThe reference note has been added by Royal Masking based on the background information of the NTP. (Hydrazinium(2-) sulphate)

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.

Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

Potential Health Effects

Inhalation May be fatal if inhaled. Causes respiratory tract irritation.
Skin Toxic if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Harmful if swallowed.
Target Organs Nerves, Blood, Liver, Kidney, Lungs,

Additional Information
RTECS: MV962000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)
no data available

Ecotoxicity effects
no data available

Further Information on ecology
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
13. DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations. 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.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 2923 Class: 8 (6.1) Packing group: III
Proper shipping name: Corrosive solids, toxic, n.o.s. (Hydrazinium(2+)+ sulphate)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 2923 Class: 8 (6.1) Packing group: III EMS-No: F-A, S-B
Proper shipping name: CORROSIVE SOLID, TOXIC, N.O.S. (Hydrazinium(2+) sulphate)
Marine pollutant: No

IATA
UN-Number: 2923 Class: 8 (6.1) Packing group: III
Proper shipping name: Corrosive solid, toxic n.o.s. (Hydrazinium(2+)+ sulphate)

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect: Highly toxic by inhalation, Harmful by Ingestion, Toxic by skin absorption, Skin sensitizer, Irritant, Carcinogen

DSL Status
All components of this product are on the Canadian DSL list.

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
Hydrazinium(2+) sulphate
CAS-No. 10034-93-2
Revision Date 1993-04-24

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
Hydrazinium(2+) sulphate
CAS-No. 10034-93-2
Revision Date 1993-04-24

Pennsylvania Right To Know Components
Hydrazinium(2+) sulphate
CAS-No. 10034-93-2
Revision Date 1993-04-24

New Jersey Right To Know Components
Hydrazinium(2+) sulphate
CAS-No. 10034-93-2
Revision Date 1993-04-24

16. OTHER INFORMATION

Further Information
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