1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Mercury(II) sulfide red
Product Number: 243566
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 #: (314) 776-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Skin sensitiser

GHS Classification
Skin sensitization (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Warning
Hazard statement(s)
H317 May cause an allergic skin reaction.

Precautionary statement(s)
P280 Wear protective gloves.

Other hazards
Contact with acids liberates toxic gas.

HMIS Classification
Health hazard: 2
Flammability: 0
Physical hazards: 0

NFPA Rating
Health hazard: 2
Fire: 0
Reactivity Hazard: 0

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Synonyms</th>
<th>Mercuric sulfide red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>HgS</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>232.66 g/mol</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury(II) sulfide</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>1344-48-5</td>
</tr>
<tr>
<td>EC-No.</td>
<td>215-696-3</td>
</tr>
</tbody>
</table>

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. Consult a physician.

**In case of eye contact**
Flush eyes with water as a precaution.

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

5. FIREFIGHTING MEASURES

**Conditions of flammability**
Not flammable or combustible.

**Suitable extinguishing media**
Dry powder

**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. - Sulphur oxides, Mercury/mercury oxides.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

**Environmental precautions**
Do not let product enter drains.

**Methods and materials for containment and cleaning up**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage**
Keep container tightly closed in a dry and well-ventilated place.
Never allow product to get in contact with water during storage. Do not store near acids. Light sensitive.

8. EXPOSURE CONTROLS/PERSOHAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury(II) sulfide</td>
<td>1344-48-5</td>
<td>TWA 0.025</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
<td></td>
</tr>
</tbody>
</table>

Remarks

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Nervous System impairment Kidney damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen Danger of cutaneous absorption varies</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.1 mg/m3</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
</tr>
</tbody>
</table>

Skin notation

| TWA    | 0.05 mg/m3 | USA. NIOSH Recommended Exposure Limits |

| C      | 0.1 mg/m3 | USA. NIOSH Recommended Exposure Limits |

Potential for dermal absorption

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (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. 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
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals, 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 solid
Colour red

Safety data
pH no data available
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting/freezing point</td>
<td>Melting point/range: 583.5 °C (1,082.3 °F) - lit.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>584 °C (1,083 °F) at 1,013 hPa (760 mmHg)</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Density</td>
<td>8.1 g/mL at 25 °C (77 °F)</td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>no data available</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
no data available

**Conditions to avoid**
Light.

**Materials to avoid**
acids, Strong oxidizing agents, Halogens, Metal oxides

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Mercury/mercury oxides.
Other decomposition products - no data available

### 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**
no data available
Respiratory or skin sensitization
May cause allergic skin reaction.

Germ cell mutagenicity
no data available

Carcinogenicity
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Mercury(II) sulfide)
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
- Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
- Ingestion: May be harmful if swallowed.
- Skin: May be harmful if absorbed through skin. May cause skin irritation.
- Eyes: May cause eye irritation.

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: OX0720000

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
13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards
Skin sensitiser

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
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
Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury(II) sulfide</td>
<td>1344-48-5</td>
<td>1989-08-11</td>
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New Jersey Right To Know Components

<table>
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<tr>
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<th>CAS-No.</th>
<th>Revision Date</th>
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California Prop. 65 Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.</td>
<td>CAS-No.</td>
<td>Revision Date</td>
</tr>
<tr>
<td>Mercury(II) sulfide</td>
<td>1344-48-5</td>
<td>2007-09-28</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Further information
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