1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Luminol
Product Number : A8511
Brand : Sigma
Company : Sigma-Aldrich

3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone #: (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 3-Aminophthalhydrazide
           5-Amino-2,3-dihydro-1,4-phthalazinedione

Formula : C8H7N3O2
Molecular Weight : 177.16 g/mol

<table>
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<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration [%]</th>
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<td>521-31-3</td>
<td>208-309-4</td>
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3. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
   Irritant

HMIS Classification
   Health Hazard: 2
   Flammability: 0
   Physical hazard: 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.
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**
   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.

5. FIRE-FIGHTING MEASURES

   **Flammable properties**
   - Flash point: no data available
   - 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.

6. ACCIDENTAL RELEASE MEASURES

   **Personal precautions**
   Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

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

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

7. HANDLING AND STORAGE

   **Handling**
   Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
   Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive 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. 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 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: powder
- Colour: light yellow

Safety data
- pH: no data available
- Melting point: 300 °C (572 °F)
- Boiling point: no data available
- Flash point: no data available
- Ignition temperature: no data available
- Lower explosion limit: no data available
- Upper explosion limit: no data available
- Water solubility: no data available

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Materials to avoid
Strong oxidizing agents, Strong acids, Strong bases, Strong reducing agents

Hazardous decomposition products
- Hazardous decomposition products formed under fire conditions.
  Carbon oxides, nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Acute toxicity
no data available

Irritation and corrosion
no data available

Sensitisation
no data available

Chronic exposure
no data available
Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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.

12. ECOLOGICAL INFORMATION

**Elimination information (persistence and degradability)**
no data available

**Ecotoxicity effects**
no data available

**Further information on ecology**
no data available

13. DISPOSAL CONSIDERATIONS

- **Product**: Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
- **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**: Irritant
- **TSCA Status**: On TSCA Inventory
- **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
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 Listed

Pennsylvania Right To Know Components
5-Amino-1,2,3,4-tetrahydrophthalazine-1,4-dione    CAS-No. 521-31-3

New Jersey Right To Know Components
5-Amino-1,2,3,4-tetrahydrophthalazine-1,4-dione    CAS-No. 521-31-3

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Further information
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