MSDS – Luminol

MATERIAL SAFETY DATA SHEET (MSDS) / SAFETY DATA SHEET (SDS)
1. Identification
Product Name: Luminol
Chemical Name: 5-Amino-2,3-dihydro-1,4-phthalazinedione
CAS Number: 521-31-3
Recommended Use: Laboratory reagent; forensic chemiluminescence
Restrictions on Use: For professional/laboratory use only

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2. Hazard(s) Identification
GHS Classification:
Acute Toxicity (Oral) – Category 4
Skin Irritation – Category 2
Eye Irritation – Category 2A
Signal Word: Warning
Hazard Statements:
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
Precautionary Statements:
Avoid breathing dust
Wear protective gloves and eye protection
Wash thoroughly after handling

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3. Composition / Information on Ingredients

Component	CAS No.	Concentration
Luminol	521-31-3	≥ 98%

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4. First-Aid Measures
Inhalation: Move to fresh air. Seek medical attention if symptoms persist.
Skin Contact: Wash with soap and water for at least 15 minutes.
Eye Contact: Rinse cautiously with water for several minutes; remove contact lenses if present.
Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention.
Most Important Symptoms: Irritation of eyes, skin, respiratory tract

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5. Fire-Fighting Measures
Suitable Extinguishing Media: Water spray, dry chemical, CO_2, foam
Specific Hazards: Combustion may produce nitrogen oxides and carbon oxides
Protective Equipment: Self-contained breathing apparatus (SCBA)

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6. Accidental Release Measures
Personal Precautions: Avoid dust formation; wear PPE
Environmental Precautions: Prevent release into drains or waterways
Clean-up Methods: Sweep up and place in appropriate waste container

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7. Handling and Storage
Handling: Use in well-ventilated area; avoid contact with skin and eyes
Storage: Store tightly closed in a cool, dry place away from oxidizers

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8. Exposure Controls / Personal Protection
Exposure Limits: Not established
Engineering Controls: Local exhaust ventilation recommended
Personal Protective Equipment (PPE):
Gloves (nitrile recommended)
Safety goggles
Lab coat
Dust mask or respirator if airborne dust is generated

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9. Physical and Chemical Properties
Appearance: Pale yellow crystalline powder
Odour: Odourless
Melting Point: ~329–332 °C (decomposes)
Solubility: Slightly soluble in water; soluble in alkaline solutions
pH: Not applicable (solid)

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10. Stability and Reactivity
Stability: Stable under normal conditions
Incompatible Materials: Strong oxidizers, strong bases
Hazardous Decomposition Products: Nitrogen oxides, carbon oxides

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11. Toxicological Information
Acute Toxicity:
Oral LD_{50} (rat): ~500 mg/kg (estimated)
Likely Routes of Exposure: Ingestion, inhalation, skin/eye contact
Chronic Effects: No data indicating carcinogenicity

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12. Ecological Information
Eco toxicity: No data available
Persistence & Degradability: No data available
Bio accumulative Potential: Unknown

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13. Disposal Considerations
Dispose of contents/container in accordance with local, regional, and national regulations. Treat as hazardous laboratory waste.

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14. Transport Information
UN Number: Not regulated
Proper Shipping Name: Not regulated
Transport Hazard Class: Not applicable

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15. Regulatory Information
Not listed as a carcinogen by IARC, NTP, or OSHA
GHS classification may vary by jurisdiction

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16. Other Information
Preparation Date: 28th July 2024