

Safety Data Sheet

Section 1: Identification of the substance/mixture and of the company/undertaking

| 1.1 | Product identifiers | |
|-----|--|---|
| | Product name: | Luminol [3-Aminophthalhydrazide] *CAS 521-31-3* |
| | Product number: | 11050 |
| 1.2 | Relevant identified uses of the substanc | e or mixture and uses advised against |
| | Identified uses: | For research use only. Not intended for diagnostic or therapeutic use |
| 1.3 | Details of the supplier of the datasheet | |
| | Company: | AAT Bioquest, Inc. |
| | Address: | 5775 W Las Positas Blvd, Pleasanton, CA 94588 |
| | Telephone: | (408)-733-1055 |
| | Fax: | (408)-733-1304 |
| | Email: | info@aatbio.com |
| .4 | Emergency telephone number | |
| | Chemtrec (Within USA): | 1-(800)-424-9300 |
| | Chemtrec (Outside USA): | 1-(703)-527-3887 |
| Sec | tion 2: Hazard identifications | |
| 2.1 | Classification of the substance or mixture | |
| | Serious eye damage/eye irritation: | Not a dangerous substance or mixture according to the Globally Harmonized System (GHS) |
| 2.2 | Label elements | |
| | Signal word: | Not applicable |
| | Hazard statements: | None |
| | Symbols/Pictograms: | None |
| | Precautionary statements - prevention: | Wash hands thoroughly after handling |
| | Precautionary statements - response: | IF exposed concerned: Get medical advice/attention |
| | Precautionary statements - storage: | None |
| | Precautionary statements - disposal: | None |
| 2.3 | Hazards not otherwise classified (HNOC) | or not covered by GHS |
| | Hazards not otherwise classified (HNOC): | None |
| 2.4 | Other information | |
| | Other hazards: | None |

| 3.1 | Substances | |
|-------------|--|---|
| | Chemical name: | Luminol [3-Aminophthalhydrazide] *CAS 521-31-3* |
| | CAS No.: | 521-31-3 |
| | Molecular weight: | 177.16 |
| | Formula: | |
| Sec | tion 4: First aid measures | |
| i .1 | First-aid measures | |
| | General advice: | lf symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on the skin, or or clothing. |
| | Eye contact: | Immediately flush with plenty of water. After initial flushing, remove an contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician. |
| | Skin contact: | Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash off immediately with soap and plenty of water. Immediate medical attention is not required. |
| | Inhalation: | Remove to fresh air If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use a barrier to give mouth-to-mouth resuscitation. Artificial respiration and/or oxygen may be necessary. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist call a physician. |
| | Ingestion: | Do NOT induce vomiting. Rinse/clean mouth with water and drink plent of water afterward. Never give anything by mouth to an unconscious person. Consult a physician. |
| | Self-protection of the first aider: | Use personal protective equipment. |
| 1.2 | Most important symptoms and effects, both acute and delayed | |
| | Symptoms: | No information available. |
| 1.3 | Indication of any immediate medical attention and special treatment needed | |
| | Note to physicians: | Treat symptomatically. |
| Sec | tion 5: Firefighting measures | |
| 5.1 | Suitable extinguishing media | |
| | Suitable extinguishing media: | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| | Unsuitable extinguishing media: | No information available. |

5.2 Specific hazards arising from the chemical

| | Specific hazards arising from the chemical: | In the event of a fire and/or explosio sensitization by inhalation and skin o lead to the release of irritating and t | contact. Thermal decomposition can |
|--|--|---|---|
| | Hazardous combustion products: | Carbon oxides, sulfur oxides | |
| 5.3 | Explosion data | | |
| | Sensitivity to mechanical impact: | No information available. | |
| | Sensitivity to static discharge: | No information available. | |
| 5.4 | Protective equipment and precautions | for firefighters | |
| | Protective equipment and precautions for firefighters: | As in any fire, wear self-contained bi demand, MSHA/NIOSH (approved oi gear. | |
| Sec | tion 6: Accidental release measure | es | |
| 6.1 Personal precautions, protective equipment, and emergency procedures | | | |
| | Personal precautions: | Use personal protective equipment and upwind of spill/leak. Evacuate pe | as required. Keep people away from ersonnel to safe areas. |
| 6.2 | Environmental precautions | | |
| | Environmental precautions: | Prevent further leakage or spillage i from entering drains. Do not flush in system. See Section 12 for additiona | to surface water or sanitary sewer |
| 6.3 | Methods and material for containmen | t and cleaning up | |
| | Methods for containment: | Prevent further leakage or spillage i with a plastic sheet or tarp to minim liquid spill for later disposal. | |
| | Methods for cleaning up: | Use personal protective equipment a a plastic sheet or tarp to minimize sp Take up mechanically, placing in app Avoid creating dust. Clean contamin with inert absorbent material. Dam of labeled containers. Sweep up and sh disposal. After cleaning, flush away to precautionary measures against sta | preading and keep the powder dry. propriate containers for disposal. ated surfaces thoroughly. Soak up up. Pick up and transfer to properly novel into suitable containers for traces with water. Take |
| Sec | Section 7: Handling and storage | | |
| 7.1 | Precautions for safe handling | | |
| | Advice on safe handling: | Avoid contact with skin, eyes, or clot equipment as required. Wash contai not breathe dust/fume/gas/mist/vap smoke when using this product. Use | minated clothing before reuse. Do oors/spray. Do not eat, drink or |
| 7.2 | Conditions for safe storage, including a | ny incompatibilities | |
| | Storage conditions: | Keep the container tightly closed in a out of the reach of children. Keep co well-ventilated place. Keep in proper explosive peroxides. | |
| | Incompatible materials: | None known based on information s | upplied. |
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8.1 Control parameters

| o. I | control parameters | |
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| | Exposure guidelines: | This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies. |
| 8.2 | Appropriate engineering controls | |
| | Engineering controls: | Showers, eyewash stations, ventilation systems |
| 8.3 | Individual protection measures, such as personal protective equipment | |
| | Eye/face protection: | Tight sealing safety goggles. Face protection shield. |
| | Skin and body protection: | Wear protective gloves and protective clothing. |
| | Respiratory protection: | If exposure limits are exceeded, or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive- pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |
| | General hygiene considerations: | When using, do not eat, drink or smoke. Regular cleaning of equipment, work area, and clothing is recommended. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling. Keep away from food, drink, and animal feeding stuff. |

Section 9: Physical and chemical properties

| Physical state: | solid |
|-------------------------------|--------------------------|
| Solubility in water: | low |
| Appearance: | No information available |
| Odor/odor threshold: | No information available |
| pH: | No information available |
| Melting point/freezing point: | No information available |
| Boiling point: | No information available |
| Flashpoint: | No information available |
| Liquid density: | No information available |
| Evaporation rate: | No information available |
| Upper flammability limit: | No information available |
| Lower flammability limit: | No information available |
| Vapor pressure: | No information available |
| Vapor density: | No information available |
| Specific gravity: | No information available |
| Water solubility: | No information available |
| Solubility in other solvents: | No information available |
| Partition coefficient: | No information available |
| Autoignition temperature: | No information available |
| Decomposition temperature: | No information available |
| Viscosity: | No information available |
| | |

| Explosive properties: | No information available |
|---|---|
| Oxidizing properties: | No information available |
| ection 10: Stability and reactivity | |
| Reactivity: | No data available |
| Chemical stability: | May form explosive peroxides |
| Possibility of hazardous reactions: | None under normal processing |
| Hazardous polymerization: | No information available |
| Conditions to avoid: | Extremes of temperatures and direct sunlight |
| Incompatible materials: | Strong oxidizing agents |
| Hazardous decomposition products: | Carbon oxides |
| section 11: Toxicological informatio | n |
| 1.1 Information on likely routes of expos | ure |
| Inhalation: | No data available |
| Eye contact: | No data available |
| Skin contact: | No data available |
| Ingestion: | No data available |
| 1.2 Information on toxicological effects | |
| Symptoms: | No information available |
| 1 3 Delayed and immediate effects as we | ll as chronic effects from short and long-term exposure |
| Chronic toxicity: | Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure. |
| 1.4 Numerical measures of toxicity - prod | duct information |
| Unknown acute toxicity: | No information available |
| Section 12: Ecological information | |
| Ecotoxicity: | May cause long-lasting harmful effects to aquatic life. |
| Persistence and degradability: | No information available |
| Bioaccumulation: | No information available |
| Mobility: | No information available |
| Section 13: Disposal consideration | |
| Disposal of wastes: | Dispession should be in accordance with explicible regional metional on |
| | local laws and regulations. |
| Contaminated packaging: | |
| Contaminated packaging: Other information: | - |
| | local laws and regulations. Do not reuse container Waste codes should be assigned by the user based on the application |
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Section 15: Regulatory information

| 15.1 International Inventories | |
|---|---|
| US Toxic Substances Control Act (TSCA): | Not listed |
| Canada (DSL/NDSL): | Not listed |
| Europe (EINECS/ELINCS/NLP): | Not listed |
| Australia (AICS): | Not listed |
| South Korea (KECL): | Not listed |
| China (IECSC): | Not listed |
| Japan (ENCS): | Not listed |
| Phillipines (PICCS): | Not listed |
| 15.2 US Federal Regulations | |
| SARA 313: | Not listed |
| SARA 311/312 components: | Not listed |
| CWA (Clean Water Act): | This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR122.21 and 40CFR 122.42). |
| 15.3 US State Regulations | |
| California Proposition 65: | Not listed |
| Massachusetts-RTK: | Not listed |
| New Jersey-RTK: | Not listed |
| Pennsylvania-RTK: | Not listed |
| U.S. State Right-To-Know Regulations: | This product does not contain any substances regulated by state right- to-know regulations. |

Section 16: Other information

16.1 HMIS

| Health hazards: | - | |
|-----------------------------------|---|--|
| Flammability: | - | |
| Reactivity: | - | |
| Personal protection: | - | |
| 16.2 NFPA | | |
| Health hazards: | - | |
| Flammability: | - | |
| Stability: | - | |
| Physical and chemical properties: | - | |