Section 1. Product and Company Identification

Product Name: 4-bromo-A23187
Product ID: A0101
Chemical Name (Synonyms): 4-Bromo-A-23187, 4-BrA23187, 4-Bra23187
Supplier: LKT Laboratories, Inc
545 Phalen Blvd.
St. Paul, MN 55130 USA
Ph: 651-644-8424 Fax: 651-644-8357
www.lktlabs.com - getinfo@lktlabs.com

Section 2. Hazards Identification

GHS Classification:
- Acute Toxicity, Oral (Category 4) H302
- Acute Toxicity, Skin (Category 4) H312
- Skin Corrosion/Irritation (Category 2) H315
- Serious Eye Damage/ Eye Irritation (Category 2) H319
- Acute Toxicity, Inhalation (Category 4) H332
- Specific Target Organ Toxicity, Single Exposure (Category 3) Respiratory system, H335

GHS Label elements including precautionary statements

Pictogram: !
Signal word: Warning
Hazard and precautionary statements:

Hazard statements:
H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation

Precautionary statements:
P261 - Avoid breathing dust, fumes, gas, mist, vapors, spray.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P313 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 + IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P330 - Rinse mouth.
P332 + P313 - If skin irritation occurs, get medical advice/attention.
P337 + P313 - If eye irritation persists, get medical advice/attention.
P362 + P364 - Take off contaminated clothing and wash it before reuse.

HMIS Classification:
- Health hazard: 2
- Chronic health hazard: 0
- Flammability: 0
- Physical hazard: 0

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

Potential Health Effects:
- Inhalation - Acute toxicity. May be harmful if inhaled. May cause respiratory tract irritation.
- Skin - Acute toxicity. May be harmful if contact with skin. May cause skin irritation.
- Eyes - May cause serious eye irritation.
Ingestion - Acute toxicity. Harmful if swallowed.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Ingredient: Title Compound</th>
<th>Percent: 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C_{29}H_{36}BrN_{3}O_{6}</td>
<td>602.52</td>
</tr>
<tr>
<td>CAS No.</td>
<td>76455-48-6</td>
<td>EC No. 634-762-6</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

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

**Eye Contact**
Flush eyes with water as a precaution.

**Skin Contact**
Wash off with soap and plenty of water.

**Inhalation**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

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

Section 5. Firefighting Measures

**Flash Point**
Not available.

**Extinguishing Media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Firefighting Procedures**
Wear self-contained breathing apparatus for fire fighting if necessary.

**Unusual Fire Hazards**
Carbon oxides, nitrogen oxides (NOx).

Section 6. Accidental Release Measures

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

**Environmental Precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleanup**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 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.

**Storage Conditions**
Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 4°C

**Hazardous Decomposition Products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), hydrogen bromide gas and sodium oxides.

**Other Remarks**
Avoid direct light.
Section 8. Exposure Controls/Personal Protection

Personal protective equipment

EXPOSURE CONTROLS
Contains no substances with occupational exposure limit values.

General industrial hygiene practice.

PERSONAL PROTECTION
Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin 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.

Body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>Slight yellow crystals.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Volatility</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Not available</td>
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<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

Stability
Stable under recommended storage conditions.

Materials To Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), hydrogen bromide gas and sodium oxides.
### Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
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</tr>
<tr>
<td>Inhalation LC50</td>
<td>Not available.</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other information on acute toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Specific organ toxicity single exposure (GHS)</td>
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<tr>
<td>Specific organ toxicity repeated exposure (GHS)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not available.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td>Not available.</td>
</tr>
<tr>
<td>Synergistic effects</td>
<td>Not available.</td>
</tr>
<tr>
<td>Additional Information</td>
<td>Not available.</td>
</tr>
<tr>
<td>Signs and symptoms of exposure</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Potential Health Effects**

- Inhalation - Acute toxicity. May be harmful if inhaled. May cause respiratory tract irritation.
- Skin - Acute toxicity. May be harmful if contact with skin. May cause skin irritation.
- Eyes - May cause serious eye irritation.
- Ingestion - Acute toxicity. Harmful if swallowed.

**Carcinogenicity**

- 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: 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.

### Section 12. Ecological Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility in soil</td>
<td>Not available.</td>
</tr>
<tr>
<td>PBT and vPvB assessment</td>
<td>PBT/vPvB assessment not available as chemical safety assessment not required/not available</td>
</tr>
</tbody>
</table>
Persistence and degradability: Not available.

Bioaccumulative potential: Not available.

Other adverse effects: Runoff from fire control or dilution water may cause pollution.

Section 13. Disposal Considerations

Waste Disposal
- Dispose of material according to all federal, state and local regulations.
- Offer material to a licensed, professional waste disposal company to dispose of as unused product.

Section 14. Transport Information

DOT (US): Not dangerous goods.
IATA: Not dangerous goods.
IMDG: Not dangerous goods.

Section 15. Regulatory Information

Reach No.

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 Components: No SARA hazards.

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

Pennsylvania Right To Know Components: 4-bromo-A23187 CAS #: 76455-48-6 Revision Date:

New Jersey Right To Know Components: 4-bromo-A23187 CAS #: 76455-48-6 Revision Date:

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

Section 16. Other Information

Other information: The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.