Section 1. Product and Company Identification

Product Name: 5-Aza-2'-deoxycytidine
Product ID: A9603
Chemical Name (Synonyms): 2'-Deoxy-5-azacytidine, 4-Amino-1-(2-deoxy-β-D-ribofuranosyl)-1,3,5-triazin-2(1H)-one, Decitabine
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

Emergency Phone #: 1-800-424-9300

Section 2. Hazards Identification

GHS Classification:
Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Germ cell mutagenicity (Category 2), H341
Reproductive toxicity (Category 1B), H360
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

GHS Label elements including precautionary statements

Pictogram:

Signal word: Danger

Hazard and precautionary statements:

Hazard statements:
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H341 - Suspected of causing genetic defects.
H360 - May damage fertility or the unborn child.

Precautionary statements:
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P251 - Avoid breathing dust, fumes, gas, mist, vapors, and spray.
P264 - Wash skin thoroughly after handling.
P270 - Do not eat, drink, or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, eye protection, and 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 - 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.
P308 + P313 - IF INHALATION: Get medical advice/attention.
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 - Take off contaminated clothing and wash before reuse.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P401 - Dispose of contents/container to an approved waste disposal plant.

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 - May be harmful if inhaled. May cause respiratory irritation.
Skin - May be harmful if absorbed through skin. Causes skin irritation.
Eyes - Causes 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>$\text{C}<em>8\text{H}</em>{12}\text{N}_4\text{O}_4$</td>
<td>228.21</td>
</tr>
<tr>
<td>CAS No.</td>
<td>2353-33-5</td>
<td>219-089-4</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 plenty of water for at least 15 minutes and consult a physician.

- **Skin Contact**
  - Wash off with soap and plenty of water. Consult a physician.

- **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**
  - Use personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

- **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: Ambient

- **Hazardous Decomposition Products**
  - Not available.

- **Other Remarks**
  - Reproduction: Suspected of causing genetic defects. May damage fertility or the unborn child. Reproductive toxicity. Germ cell mutagenicity.
Section 8. Exposure Controls/Personal Protection

**Personal protective equipment**

**EXPOSURE CONTROLS**
Contains no substances with occupational exposure limit values. Wash hands before breaks and at the end of workday.

**PERSONAL PROTECTION**

**Eye/face protection**: Safety glasses with side-shields conforming to EN 166. 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. Full and splash contact - Material: Nitrile rubber. Minimum layer thickness: 0.11 mm, Break through time: 480 min., Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M).

**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.

**Respiratory protection**: Where risk assessment shows air-purifying respirators are appropriate, use 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).

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Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>White to off-white powder.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Melting Point</th>
<th>200˚C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volatility</td>
<td>Not available.</td>
</tr>
<tr>
<td>n-octanol/water</td>
<td>acetic acid: water (1:1): 50 mg/mL</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Not available.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>log Pow: -2.27</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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Section 10. Stability and Reactivity

**Stability**
Stable under recommended storage conditions.

**Materials To Avoid**
Oxidizing agents.

**Hazardous Decomposition Products**
Not available.
### Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Not available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not available</td>
</tr>
<tr>
<td>Inhalation LC50</td>
<td>Not available</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not available</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Not available</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not available</td>
</tr>
<tr>
<td>Other information on acute toxicity</td>
<td>Not available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>In vitro tests showed mutagenic effects.</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Presumed human reproductive toxicant.</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific organ toxicity single exposure (GHS)</td>
<td>Not available</td>
</tr>
<tr>
<td>Synergistic effects</td>
<td>Not available</td>
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<tr>
<td>Specific organ toxicity repeated exposure (GHS)</td>
<td>Not available</td>
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<tr>
<td>Additional Information</td>
<td>RTECS: XZ3012000</td>
</tr>
<tr>
<td>Signs and symptoms of exposure</td>
<td>Not available</td>
</tr>
</tbody>
</table>

#### Potential Health Effects
- **Skin**: May be harmful if absorbed through skin. Causes skin irritation.
- **Inhalation**: May be harmful if inhaled. May cause respiratory irritation.
- **Skin**: May cause respiratory irritation.
- **Ingestion**: Acute toxicity. Harmful if swallowed.
- **Reproduction**: Suspected of causing genetic defects. May damage fertility or the unborn child. Reproductive toxicity. Germ cell mutagenicity.

#### 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>Toxicity</td>
<td>Not available</td>
</tr>
<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</td>
</tr>
</tbody>
</table>
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. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Section 14. Transport Information

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

Further Information

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 5-Aza-2′-deoxycytidine CAS #: 2353-33-5 Revision Date:

New Jersey Right To Know Components 5-Aza-2′-deoxycytidine CAS #: 2353-33-5 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.