Section 1. Product and Company Identification

Product Name: 4-Dimethylaminopyridine
Product ID: D3351
Chemical Name (Synonyms): DMAP; Pyridine, 4-(dimethylamino)-;N,N-Dimethyl-pyridin-4-amine
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 3), H301
- Acute toxicity, Skin (Category 2), H310
- Skin irritation (Category 2), H315
- Eye irritation (Category 2A), H319
- Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

GHS Label elements including precautionary statements

Pictogram:

Signal word: Danger

Hazard statements:
- H301 - Toxic if swallowed.
- H310 - Fatal in contact with skin.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H335 - May cause respiratory irritation.

Precautionary statements:
- P261 - Avoid breathing dust, fumes, gas, mist, vapors, and spray.
- P262 - Do not get in eyes, on skin, or on clothing.
- 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, protective clothing, eye protection, and face protection.
- P301 + P310 + P330 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
- P302 + P350 + P310 - IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- 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.
- P501 - Dispose of contents/container to an approved waste disposal plant.

HMIS Classification:
- Health hazard: 4
- Chronic health hazard: 0
- Flammability: 1
- Physical hazard: 0

NFPA Rating:
- Health hazard: 3
- Fire hazard: 1
- Reactivity hazard: 0

Potential Health Effects:
- Inhalation: May be harmful if inhaled. May cause respiratory irritation.
- Skin: Acute toxicity. Fatal in contact with skin. Causes skin irritation.
- Eyes: Causes serious eye irritation.
Ingestion - Acute toxicity. Toxic if swallowed. Specific target organ toxicity - single exposure - respiratory.

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_{7}H_{10}N_{2}</td>
<td>122.17</td>
</tr>
<tr>
<td>CAS No.</td>
<td>1122-58-3</td>
<td>EC No. 214-353-5</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

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

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. Take victim immediately to hospital. 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

110˚C - closed cup.

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

Firefighting Procedures
Wear self-contained breathing apparatus for firefighting 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 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. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. 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
Storage class (TRGS 510): Non-combustible acute toxic Cat 1 and 2/ very toxic hazardous materials.
**Section 8. Exposure Controls/Personal Protection**

**Personal protective equipment**
Contains no substances with occupational exposure limit values. Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.

**PERSONAL PROTECTION**
- **Eye/face protection**: Face shield and safety glasses. 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 a 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).

**Section 9. Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid.</td>
<td>White to light yellow powder.</td>
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</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Volatility</th>
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<tbody>
<tr>
<td>162°C</td>
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<table>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
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<tbody>
<tr>
<td>108-110°C (lit.)</td>
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</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
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</thead>
<tbody>
<tr>
<td>Soluble in methanol (0.1g/mL).</td>
<td>11.14 at 5°C</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Ignition temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>110˚C - closed cup.</td>
<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Lower explosion limit</th>
<th>Autoignition temperature</th>
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</thead>
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<tr>
<td>Not available.</td>
<td>420°C</td>
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</table>

<table>
<thead>
<tr>
<th>Upper explosion limit</th>
<th>Vapor pressure</th>
</tr>
</thead>
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<tr>
<td>Not available.</td>
<td>0.169 hPa at 25˚C</td>
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</table>

<table>
<thead>
<tr>
<th>Water solubility</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>76 g/L at 20˚C.</td>
<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water</th>
<th>Odor Threshold</th>
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<tbody>
<tr>
<td>log Pow: 1.34</td>
<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Relative vapor density</th>
<th>Evaporation rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Section 10. Stability and Reactivity**

**Stability**
Stable under recommended storage conditions.

**Materials To Avoid**
Oxidizing agents and acids.

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

### Oral LD50
Rat - 140 mg/kg

### Inhalation LC50
Not available.

### Dermal LD50
Rabbit - 90mg/kg
Guinea pig - 100 - 200 mg/kg

### Other information on acute toxicity
Not available.

### Reproductive Toxicity
Not available.

### Specific organ toxicity single exposure (GHS)
Inhalation - May cause respiratory irritation.

### Specific organ toxicity repeated exposure (GHS)
Not available.

### Teratogenicity
Not available.

### Skin corrosion/irritation
Irritating to skin.

### Serious eye damage/irritation
Irritating to eyes.

### Respiratory or skin sensitization
Buehler test
Result: Does not cause skin sensitization.

### Germ cell mutagenicity
Not available.

### 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.

### Aspiration Hazard
Not available.

### Synergistic effects
Not available.

### Signs and symptoms of exposure
Weakness, convulsions.

### Additional Information
RTECS: US9230000

Section 12. Ecological Information

### Toxicity
- **Toxicity to fish:**
  - LC50 - Danio rerio (zebra fish) 11.6 mg/l - 96h.
  - NOEC - Danio rerio (zebra fish) 5 mg/l - 96h.
  - Toxicity to daphnia and other aquatic invertebrates.
  - LC50 - Daphnia magna (Water flea) - > 100 mg/l - 48h.
- **Toxicity to algae:** EC50 - Pseudokirchneriella

### Mobility in soil
Not available.

### PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not
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.

Persistence and degradability

Not available.

Bioaccumulative potential

No bioaccumulation is to be expected (log Pow <=4).

Other adverse effects

Not available.

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)

UN number: 2811 Class: 6.1 Packing Group: II
Proper shipping name: Toxic solid, organic, n.o.s. (4-Dimethylaminopyridine)
Reportable Quantity (RQ): Poison Inhalation Hazard: No

IATA

UN number: 2811 Class: 6.1 Packing Group: II
Proper shipping name: Toxic solid, organic, n.o.s. (4-Dimethylaminopyridine)

IMDG

UN number: 2811 Class: 6.1 Packing Group: II EMS #: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (4-Dimethylaminopyridine)

Section 15. Regulatory Information

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

Acute health hazard.

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

4-Dimethylaminopyridine CAS #: 1122-58-3 Revision Date:

New Jersey Right To Know Components

4-Dimethylaminopyridine CAS #: 1122-58-3 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.