Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION
Product Name: 3-Hydroxy-4,5-bis(hydroxymethyl)-2-methylpyridine
Compound ID: AG003JJJ
CAS Number: 65-23-6
Identified uses: Laboratory chemicals, manufacture of chemical compounds
Company: Angene International Limited
Phone: +44 (020) 32390665

2. HAZARDS IDENTIFICATION
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
- Skin corrosion/irritation, (Category 2), H315
- Serious eye damage/eye irritation, (Category 2A), H319
- Specific target organ toxicity, single exposure; Respiratory tract irritation, (Category 3), H335
For the full text of the H-Statements mentioned in this Section, see Section 16.

3. COMPOSITION/INFORMATION ON INGREDIENTS
Chemical Name: 3-Hydroxy-4,5-bis(hydroxymethyl)-2-methylpyridine
CAS Number: 65-23-6
Molecular Formula: C8H11NO3
Molecular Weight: 169.1800 g/mol

4. FIRST AID MEASURES
Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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

Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2 or section 11)

Indication of any immediate medical attention and special treatment needed
no data available

5. FIREFIGHTING MEASURES
Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas

Advice for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

Further information
no data available
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

Environmental precautions
Do not let product enter drains.

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

Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. For precautions see section 2.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature 2 - 8 °C. Keep container tightly closed in a dry and well-ventilated place. Air, light, and moisture sensitive.

Specific end use(s)
Apart from the uses mentioned in section 1, no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment
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.

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
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance / Form:</td>
<td>solid</td>
</tr>
<tr>
<td>Odor</td>
<td>no data available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>no data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>214-215 °C (lit.)</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>491.9°C at 760 mmHg</td>
</tr>
<tr>
<td>Melting point/range:</td>
<td>214-215 °C (lit.)</td>
</tr>
<tr>
<td>Flash point</td>
<td>no data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper/lower flammability</td>
<td>no data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>no data available</td>
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<tr>
<td>Relative density</td>
<td>no data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>no data available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>no data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Decomposition Temp</td>
<td>no data available</td>
</tr>
<tr>
<td>log Pow</td>
<td>no data available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity: no data available
Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: no data available
Conditions to avoid: no data available
Incompatible materials: no data available
Hazardous decomposition products: no data available
Other decomposition products: no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

Acute toxicity:
- Oral Rat LD50>11,500mg/kg

Dermal:
- no data available

Skin corrosion/irritation:
- no data available

Serious eye damage/irritation:
- no data available

Serious eye irritation:
- no data available

Respiratory or skin sensitisation:
- no data 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 carcinogen or potential 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.

Inhalation - May cause respiratory irritation.
Additional Information:
- RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Toxicity:
- no data available

Persistence and degradability:
- no data available

Bioaccumulative potential:
- no data available

Mobility in soil:
- no data available

Results of PBT and vPvB assessment:
- PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects:
- no data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:
- Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging:
- Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US):
- This substance is considered to be non-hazardous for transport.

IMDG:
- This substance is considered to be non-hazardous for transport.

IATA:
- This substance is considered to be non-hazardous for transport.

15. REGULATORY INFORMATION

SARA 302:
- No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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 Hazards:
- Acute Health Hazard

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

Pennsylvania Right To Know Components:

New Jersey Right To Know Components:
California Prop. 65 Components

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

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

<table>
<thead>
<tr>
<th>Acute Tox.</th>
<th>Acute toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit.</td>
<td>Eye irritation</td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Skin irritation</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Angene shall not be held liable for any damage resulting from handling or from contact with the above product. See invoice or packing slip for additional terms and conditions of sale.