Section 1. Product and Company Identification

Product Name: Biapenem
Product ID: B3203
Chemical Name (Synonyms): 6-[[4R,5S,6S]-2-carboxy-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-en-3-yl]thio]-6,7-dihydro-5H-pyrazolo[1,2-a]-s-triazol-4-i um hydroxide, inner salt; L-627; CL-186,815; LJ-C10,627
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: Not a hazardous substance or mixture.

GHS Label elements including precautionary statements

Pictogram

Signal word

Hazard and precautionary statements

Hazard statement: Not a hazardous substance or mixture.
Precautionary statement: Not a hazardous substance or mixture.

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

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

Potential Health Effects
Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.
Skin - May be harmful if absorbed through skin. May cause skin irritation.
Eyes - May cause eye irritation.
Section 3. Composition/Information on Ingredients

Substances

<table>
<thead>
<tr>
<th>Ingredient: Title Compound</th>
<th>Percent: 100</th>
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<tbody>
<tr>
<td>Formula</td>
<td>C_{15}H_{18}N_{4}O_{4}S</td>
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<tr>
<td>CAS No.</td>
<td>120410-24-4</td>
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<tr>
<td>Formula Wt.</td>
<td>350.39</td>
</tr>
<tr>
<td>EC No.</td>
<td></td>
</tr>
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</table>

Section 4. First Aid Measures

General advice

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.

Ingestion  Never give anything by mouth to an unconscious person. Rinse mouth with water.

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), sulfur oxides.

Section 6. Accidental Release Measures

Personal Precautions  Avoid dust formation. Avoid breathing vapors, mist, or gas.

Environmental Precautions  Do not let product enter drains.

Methods and materials for containment and cleanup  Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling  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

Store with desiccant.

Hazardous Decomposition Products  Not available.

Other Remarks
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).

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Section 9. Physical and Chemical Properties

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<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
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<tr>
<td>Solid.</td>
<td>Slightly yellow powder.</td>
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<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Volatility</th>
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<tr>
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<table>
<thead>
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<th>Melting Point</th>
<th>Density</th>
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<th>Solubility</th>
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<table>
<thead>
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<th>Lower explosion limit</th>
<th>Autoignition temperature</th>
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</table>

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<thead>
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<th>Upper explosion limit</th>
<th>Vapor pressure</th>
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<thead>
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<th>Odor</th>
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<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water</th>
<th>Odor Threshold</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Relative vapor density</th>
<th>Evaporation rate</th>
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<tbody>
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</tbody>
</table>

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Section 10. Stability and Reactivity

**Stability**

Stable under recommended storage conditions.

**Materials To Avoid**

Strong oxidizing agents.

**Hazardous Decomposition Products**

Not available.
Section 11. Toxicological Information

Oral LD50 Not available.

Inhalation LC50 Not available.

Dermal LD50 Not available.

Other information on acute toxicity Not available.

Skin corrosion/irritation Not available.

Serious eye damage/irritation Not available.

Respiratory or skin sensitization Not available.

Germ cell mutagenicity Not available.

Reproductive Toxicity Not available.

Aspiration Hazard Not available.

Specific organ toxicity single exposure (GHS) Not available.

Synergistic effects Not available.

Specific organ toxicity repeated exposure (GHS) Not available.

Additional Information RTECS: Not available.

Teratogenicity Not available.

Signs and symptoms of exposure Not available.

Potential Health Effects Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.

Skin - May be harmful if absorbed through skin. May cause skin irritation.

Eyes - May cause eye irritation.

Ingestion - May be 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

Toxicity Not available.

Mobility in soil Not available.

PBT and vPvB PBT/vPvB assessment not available as chemical safety assessment not required/not
Persistence and degradability  Not available. Other adverse effects  Not available.

Bioaccumulative potential  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.

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  Biapenem  CAS #: 120410-24-4  Revision Date:

New Jersey Right To Know Components  Biapenem  CAS #: 120410-24-4  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.