IMIPENEM CRS
Safety Data Sheet


Date of issue: 27/06/2013
Revision date: 27/11/2014
Supersedes: 27/06/2013
Version: 6.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

- Product form: Substance
- Trade name: IMIPENEM CRS
- EC no: 264-734-5
- CAS No: 74431-23-5
- Product code: I0090000
- Other means of identification: RTECS No : CL5446520

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

- Main use category: The product is intended for research, analysis and scientific education.
- Use of the substance/mixture: For professional use only
- Function or use category: Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

European Directorate for the Quality of Medicines & Healthcare
EDQM, Council of Europe
67081 Strasbourg - France
T +33(0)388412035 - F +33(0)388412771
www.edqm.eu

1.4. Emergency telephone number

Emergency number: +44(0)1235239670

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Resp. Sens. 1 H334
Skin Sens. 1 H317

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
R42
R43

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Signal word (CLP): Danger

Hazard pictograms (CLP): 

Hazard statements (CLP): H317 - May cause an allergic skin reaction
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (CLP): P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P285 - In case of inadequate ventilation wear respiratory protection
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P304+P341 - IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in
2.3. Other hazards

Other hazards not contributing to the classification: Exposure may produce an allergic reaction.

SECTION 3: Composition/information on ingredients

3.1. Substance

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Directive 67/548/EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMIPENEM</td>
<td>(CAS No) 74431-23-5</td>
<td>≤ 100</td>
<td>R42</td>
</tr>
<tr>
<td></td>
<td>(EC no) 264-734-5</td>
<td></td>
<td>R43</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMIPENEM</td>
<td>(CAS No) 74431-23-5</td>
<td>≤ 100</td>
<td>Resp. Sens. 1, H334</td>
</tr>
<tr>
<td></td>
<td>(EC no) 264-734-5</td>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
</tbody>
</table>

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: If you feel unwell, seek medical advice (show the label where possible). Delayed adverse effects possible.

First-aid measures after inhalation: Move to fresh air in case of accidental inhalation. Assure fresh air breathing. Obtain medical attention if breathing difficulty persists.

First-aid measures after skin contact: Rinse skin with water/shower. Wash with plenty of soap and water.

First-aid measures after eye contact: Rinse with water while holding the eyes wide open. Contact lenses should be removed. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion: Rinse mouth out with water. The following symptoms may occur: (see section(s) : 2, 4.2). If you feel unwell, seek medical advice. Prolonged medical observation may be indicated. (see section(s) : 4.3).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries: See Heading 2.

4.3. Indication of any immediate medical attention and special treatment needed

In all cases of doubt, or when symptoms persist, seek medical attention. If possible show this sheet, if not available show packaging or label. If the occupational exposure limit is exceeded: Specific medical surveillance.

SECTION 5: Firefighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture

Reactivity in case of fire: See Heading 10.1.

5.3. Advice for firefighters

Precautionary measures fire: Small amounts: Use normal individual fire protective equipment. Large amounts: Not applicable.

Firefighting instructions: Dilute with water.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Avoid raising dust. Wear suitable protective clothing, gloves and eye or face protection. Avoid any direct contact with the product. Evacuate unnecessary personnel. Large amounts: Not applicable.

6.1.1. For non-emergency personnel

Protective equipment: See Headings 7 and 8.

Emergency procedures: Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection. Wear suitable protective clothing and gloves.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Ensure waste is collected and contained. Clean thoroughly. Clean with water. Collect all waste in suitable and labelled containers and dispose according to local legislation. Wash the non-recoverable remainder with: Sodium hypochlorite solution.

6.4. Reference to other sections

(see section(s) : 8, 13).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed: Small amounts: See Heading 1. When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The attention of the user is drawn to the risks possibly incurred by using the product for any other purpose than that for which it was intended. Avoid contact during pregnancy/while nursing.

Precautions for safe handling: Handle and open container with care. See Heading 8. Do not handle until all safety precautions have been read and understood. Avoid any direct contact with the product. Obtain special instructions before use.

Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures. Small amounts: Material should be handled in a laboratory hood whenever possible.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Comply with applicable regulations.

Storage conditions: To guarantee the quality and properties of the product, keep: dry. Keep in a cool, well-ventilated place away from heat. Store in original container. Store according to local legislation.

Incompatible products: Strong oxidizing agents.

7.3. Specific end use(s)

See Heading 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls: Material should be handled in a laboratory hood whenever possible.


Hand protection: Gloves. Chemical resistant PVC gloves (to European standard EN 374 or equivalent)

Eye protection: Wear eye protection. DIN EN 166

Skin and body protection: Lab coat. Wear suitable protective clothing. DIN EN 13034

Respiratory protection: Quarter mask (DIN EN 140). Wear appropriate breathing apparatus if air renewal not sufficient to maintain dust/vapour under TLV
SECTION 9: Physical and chemical properties

9.1. Information on basic 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>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>Not applicable. See Heading 2, 4.2, 8.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>4.5 - 7</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>86 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: ≥ 1 (10 - 100) mg/l</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

Small amounts: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. Large amounts: Not applicable.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Small amounts: None under normal use. Large amounts: Not applicable.

10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes. Large amounts: Not applicable.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMIPENEM CRS (74431-23-5)</td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: 4.5 - 7</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: 4.5 - 7</td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
### Carcinogenicity
- Not classified

### Reproductive toxicity
- Not classified

### Specific target organ toxicity (single exposure)
- Not classified

### Specific target organ toxicity (repeated exposure)
- Not classified

### Aspiration hazard
- Not classified

### Potential adverse human health effects and symptoms
- Avoid any direct contact with the product. Small amounts: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. See first aid section of this material safety data sheet. Large amounts: Not applicable.

## SECTION 12: Ecological information

12.1. **Toxicity**
- Ecology - water: Soluble in water.

### IMIPENEM CRS (74431-23-5)

<table>
<thead>
<tr>
<th>EC50</th>
<th>100 mg/l EC50 - 48 Hour - Daphnia magna</th>
</tr>
</thead>
</table>

12.2. **Persistence and degradability**
- No additional information available

12.3. **Bioaccumulative potential**
- No additional information available

12.4. **Mobility in soil**
- No additional information available

12.5. **Results of PBT and vPvB assessment**
- No additional information available

12.6. **Other adverse effects**
- No additional information available

## SECTION 13: Disposal considerations

13.1. **Waste treatment methods**
- Regional legislation (waste): Dispose in a safe manner in accordance with local/national regulations.
- Waste disposal recommendations: Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. <strong>UN number</strong></td>
<td>Not regulated for transport</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. <strong>UN proper shipping name</strong></td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. <strong>Transport hazard class(es)</strong></td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. <strong>Packing group</strong></td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. <strong>Environmental hazards</strong></td>
<td>Dangerous for the environment: No</td>
<td>Dangerous for the environment: No</td>
</tr>
<tr>
<td></td>
<td>Marine pollutant: No</td>
<td>Marine pollutant: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine pollutant: No</td>
</tr>
</tbody>
</table>
14.6. Special precautions for user

14.6.1. Overland transport

14.6.2. Transport by sea

14.6.3. Air transport

14.6.4. Inland waterway transport
Not applicable

14.6.5. Rail transport
Not applicable

14.6.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
IMIPENEM CRS is not on the REACH Candidate List
IMIPENEM CRS is not on the REACH Annex XIV List

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

<table>
<thead>
<tr>
<th>R- Phrases</th>
<th>EUH Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resp. Sens. 1</td>
<td>Sensitisation — Respiratory, category 1</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Sensitisation — Skin, category 1</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H334</td>
<td>May cause allergy or asthma symptoms or breathing difficulties if inhaled</td>
</tr>
<tr>
<td>R42</td>
<td>May cause sensitization by inhalation</td>
</tr>
<tr>
<td>R43</td>
<td>May cause sensitisation by skin contact</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.