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

1.1. Product identifier

Product form: Substance
Trade name: Carbenicillin disodium
EC-No.: 225-360-8
CAS-No.: 4800-94-6
Product code: C0109
Formula: C17H16N2Na2O6S
Synonyms: Disodium α-Carboxybenzylpenicillin
Fugacillin
Product group: Raw material

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

1.2.1. Relevant identified uses

Main use category: Professional use
Industrial/Professional use spec: For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier
Duchefa Biochemie B.V.
A. Hofmanweg 71
2031 BH Haarlem - The Netherlands
T +31(0)23-5319093 - F +31(0)23-5318027
info@duchefa.nl

1.4. Emergency telephone number

Emergency number: Supplier contact information:
+31(0)23-5319093 (M-F 09:00-17:00)
+31(0)6-30109355 (outside office hours)

 Organisation/Company | Address | Comment |
-----------------------|---------|---------|
World Health Organization world directory of poison centres | http://apps.who.int/poisoncentres/ | Consult website for a local poison centre |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Respiratory sensitisation, Category 1 H334
Skin sensitisation, Category 1 H317

Full text of H statements: 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]

Hazard pictograms (CLP) : GHS08

Signal word (CLP) : Danger

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) : P280 - Wear protective gloves, protective clothing, eye protection, face protection.  
P304+P340+P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER, a doctor.  
P302+P352 - IF ON SKIN: Wash with plenty of water.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Carbenicillin disodium  
CAS-No. : 4800-94-6  
EC-No. : 225-360-8

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Carbenicillin disodium</td>
<td>(CAS-No.) 4800-94-6</td>
<td>&gt;= 90</td>
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<tr>
<td></td>
<td>(EC-No.) 225-360-8</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Get medical advice/attention  
Remove victim to fresh air.

First-aid measures after skin contact : Obtain medical attention  
Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Get medical advice/attention  
Rinse immediately with plenty of water.

First-aid measures after ingestion : Get immediate medical advice/attention  
Rinse mouth  
Do not induce vomiting.
4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects: Exposure may produce an allergic reaction
This material or its emissions may induce blood disorders and/or aggravate pre-existing blood disorders.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: Dry chemical powder.
Water spray
Foam
Carbon dioxide.

Unsuitable extinguishing media: Strong water jet.

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition products in case of fire: Under fire conditions, hazardous fumes will be present:
- COx.

5.3. Advice for firefighters
Precautionary measures fire: Do not enter fire area without proper protective equipment, including respiratory protection. Wear proper protective equipment.

Firefighting instructions: Prevent fire fighting water from entering the environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.

6.1.1. For non-emergency personnel
Measures in case of dust release: Use good housekeeping practices to avoid rendering dust airborne.

6.1.2. For emergency responders
No additional information available

6.2. Environmental precautions
Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Dispose in a safe manner in accordance with local/national regulations. Sweep up dry powder and dispose properly.

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station.
7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in dry, cool, well-ventilated area
Protect from moisture.
Protect from sunlight.
Storage temperature: 2 - 8 °C

7.3. Specific end use(s)
For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Additional information: Provide local exhaust or general room ventilation

8.2. Exposure controls

Hand protection:

<table>
<thead>
<tr>
<th>Type</th>
<th>Material</th>
<th>Permeation</th>
<th>Thickness (mm)</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloves</td>
<td>Nitrile rubber (NBR)</td>
<td>6 (&gt; 480 minutes)</td>
<td>0,11</td>
<td>EN 374</td>
</tr>
</tbody>
</table>

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
Dust mask. P3

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid
Appearance: Powder.
Molecular mass: 422,4 g/mol
Colour: White to off-white.
Odour: Odourless.
Odour threshold: No data available
pH: No data available
Relative evaporation rate (butylacetate=1): No data available
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
Carbenicillin disodium
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according to Regulation (EU) 2015/830

Relative density: No data available
Solubility: Water: 50 g/l
Log Pow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidising properties: No data available
Explosive limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials
Strong oxidizing agent.

10.6. Hazardous decomposition products
When heated to decomposition, emits dangerous fumes
- COx
- NOx
- SOx.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Not classified

<table>
<thead>
<tr>
<th>Carbenicillin disodium (4800-94-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 oral</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
</tr>
<tr>
<td>Carcinogenicity</td>
</tr>
</tbody>
</table>

Reproductive toxicity: Not classified
STOT-single exposure: Not classified
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified
Other information: See actual entry in RTECS for complete information: ON9105000.

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

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
Waste treatment methods: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / IATA / IMDG

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not applicable</td>
<td>Not applicable</td>
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<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.6. Special precautions for user</td>
<td>Overland transport</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>No supplementary information available</td>
<td></td>
</tr>
</tbody>
</table>
- **Transport by sea**
  Not applicable

- **Air transport**
  Not applicable

14.7. **Transport in bulk according to Annex II of Marpol 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
Carbenicillin disodium is not on the REACH Candidate List
Carbenicillin disodium is not on the REACH Annex XIV List

**15.1.2. National regulations**

**Germany**
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV
: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

**Netherlands**

- **SZW-lijst van kankerverwekkende stoffen**
  : The substance is not listed

- **SZW-lijst van mutagene stoffen**
  : The substance is not listed

- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding**
  : The substance is not listed

- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid**
  : The substance is not listed

- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling**
  : The substance is not listed

**Denmark**

Recommendations Danish Regulation
: Young people below the age of 18 years are not allowed to use the product

#### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

<table>
<thead>
<tr>
<th>Indication of changes:</th>
<th>Emergency number</th>
<th>Modified</th>
<th>Obsolete</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4</td>
<td>2</td>
<td>Removed</td>
<td>Obsolete</td>
</tr>
<tr>
<td>8.2</td>
<td>Hand protection</td>
<td>Modified</td>
<td>Specified material, thickness, etcetera of gloves</td>
</tr>
</tbody>
</table>

**Abbreviations and acronyms:**

- **ATE** Acute Toxicity Estimate
- **ADR** European Agreement concerning the International Carriage of Dangerous Goods by Road
- **BCF** Bioconcentration factor
- **CLP** Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
Carbenicillin disodium
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according to Regulation (EU) 2015/830

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPD</td>
<td>Dangerous Preparations Directive 1999/45/EC</td>
</tr>
<tr>
<td>DSD</td>
<td>Dangerous Substances Directive 67/548/EEC</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>LC50</td>
<td>Median lethal concentration</td>
</tr>
<tr>
<td>LD50</td>
<td>Median lethal dose</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>NOAEC</td>
<td>No-Observed Adverse Effect Concentration</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent Bioaccumulative Toxic</td>
</tr>
<tr>
<td>SDS</td>
<td>Safety Data Sheet</td>
</tr>
</tbody>
</table>


Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>H- or EUH-</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resp. Sens. 1</td>
<td>Respiratory sensitisation, Category 1</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Skin sensitisation, Category 1</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
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<td>H334</td>
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SDS Biochemicals version 2018

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.