SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Allantoin
Substance name : allantoin
CAS-No. : 97-59-6

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

Use of the Substance/Mixture : Ingredient for personal care products

1.3 Details of the supplier of the safety data sheet

Company : Chemistry Connection
253 Sturgis Rd
Conway, AR 72034
(501) 470-9689

1.4 Emergency telephone number

Emergency # 1-800-424-9300 (24 HR CHEMTREC)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

<table>
<thead>
<tr>
<th>Appearance</th>
<th>crystalline, powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>white, off-white</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

GHS Classification

Combustible dust : 

GHS Label element

Signal word : Warning

Hazard statements : May form combustible dust concentrations in air

Potential Health Effects

Aggravated Medical Condition : None known.

Symptoms of Overexposure : No specific symptoms known.

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.
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.

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.

### Additional hazards and advice
Risk of dust explosion.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Synonyms</th>
<th>Urea, (2,5-dioxo-4-imidazolidinyl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief description of the product</td>
<td>Active ingredient</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C4-H6-N4-O3</td>
</tr>
</tbody>
</table>

### Hazardous components
No hazardous ingredients

## SECTION 4. FIRST AID MEASURES

<table>
<thead>
<tr>
<th>General advice</th>
<th>No hazards which require special first aid measures.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If inhaled</td>
<td>Move to fresh air.</td>
</tr>
<tr>
<td></td>
<td>If symptoms persist, call a physician.</td>
</tr>
<tr>
<td>In case of skin contact</td>
<td>Take off contaminated clothing and shoes immediately.</td>
</tr>
<tr>
<td></td>
<td>Wash off with soap and plenty of water.</td>
</tr>
<tr>
<td>In case of eye contact</td>
<td>Flush eyes with water as a precaution.</td>
</tr>
<tr>
<td></td>
<td>Remove contact lenses.</td>
</tr>
<tr>
<td></td>
<td>Protect unharmed eye.</td>
</tr>
<tr>
<td></td>
<td>Keep eye wide open while rinsing.</td>
</tr>
<tr>
<td>If swallowed</td>
<td>Clean mouth with water and drink afterwards plenty of water.</td>
</tr>
<tr>
<td></td>
<td>Do not give milk or alcoholic beverages.</td>
</tr>
<tr>
<td></td>
<td>Never give anything by mouth to an unconscious person.</td>
</tr>
<tr>
<td>Most important symptoms and effects, both acute and delayed</td>
<td>No specific symptoms known.</td>
</tr>
</tbody>
</table>

### Notes to physician
Treat symptomatically.

## SECTION 5. FIREFIGHTING MEASURES

### Flammable properties

<table>
<thead>
<tr>
<th>Flash point</th>
<th>Not applicable</th>
</tr>
</thead>
</table>

### Fire fighting
### SAFETY DATA SHEET

**Allantoin**

Version 2.0  
Revision Date 01/12/2015  
Print Date 08/07/2015

| Suitable extinguishing media | Water  
|                             | Foam |

Further information  
: Consider dust explosion hazard.

**Protective equipment and precautions for firefighters**

Specific hazards during firefighting  
: None known.

Special protective equipment for firefighters  
: In the event of fire, wear self-contained breathing apparatus.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures  
: Use personal protective equipment.  
  Avoid dust formation.

Environmental precautions  
: Try to prevent the material from entering drains or water courses.

Methods and materials for containment and cleaning up  
: Sweep up and shovel.

### SECTION 7. HANDLING AND STORAGE

Advice on safe handling  
: For personal protection see section 8.

Advice on protection against fire and explosion  
: Avoid dust formation.  
  Provide appropriate exhaust ventilation at places where dust is formed.  
  Take precautionary measures against static discharges.

Conditions for safe storage  
: Keep away from direct sunlight.  
  Keep container tightly closed and dry.

Materials to avoid  
: No special restrictions on storage with other products.

Storage temperature  
: < 77 °F (< 25 °C)

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

Respiratory protection  
: No personal respiratory protective equipment normally required.  
  In case of high dust concentration use a dust mask applicable to local conditions.

Hand protection  
: Glove material: for example nitrile rubber
Eye protection : Safety glasses
Skin and body protection : Lightweight protective clothing
Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- Appearance : crystalline, powder
- Colour : white - off-white
- Odour : odourless
- Odour Threshold : No information available.
- pH : 4.0 - 6.0 (5 g/l, 20 °C)
- Melting point/range : 225 - 236 °C
- Boiling point/boiling range : not determined
- Flash point : Not applicable
- Flammability (solid, gas) : May form combustible dust concentrations in air
- Vapour pressure : < 0.001 hPa (at 25 °C; calculated (citation from literature))
- Relative vapour density : Not applicable
- Density : ca. 1.7 g/cm³ (at 20 °C)
- Water solubility : 5.7 g/l (25 °C)
  : 40 g/l (75 °C)
- Solubility in other solvents : Ethanol: 2 g/l
  : Diethylether: insoluble
- Partition coefficient: n-octanol/water : log Pow -3.14 (calculated (citation from literature))
- Auto-ignition temperature : No data available
- Thermal decomposition : Decomposes on heating.
  : Potential for exothermic hazard
- Explosive properties : Not explosive
- Oxidizing properties : No data available

9.2 Other information

- Combustibility index for deposited dust : 2 (23 °C)
  : 2 (100 °C)
- Dust explosion class : St(H)1 (Product sample, Median value of the tested sample 0.040 mm, Loss on drying 0.2 %; The value was determined in the modified Hartmann tube.)
- Minimum ignition energy : > 1,000 mJ (Product sample, Median value of the tested sample 0.040 mm, Loss on drying 0.2 %, EN 13821)
  The Minimum ignition energy (MIE) of a dust/air mix depends
on the particle size the water content and the temperature of the dust. The finer and the dryer the dust the lower the MIE.

General remark: The indicated dust explosion characteristics are only valid for this product and are sensitive to the sample's parameters.

- **Powder volume resistivity**: ca. $8 \times 10^8$ Ohmm (Product sample, Median value of the tested sample 0.040 mm, Loss on drying 0.2 %)

- **Minimum ignition temperature of a dust/air mix**: 570 °C (Median value of the tested sample 0.040 mm) determined in the BAM oven

- **Molecular weight**: 158.12 g/mol

### SECTION 10. STABILITY AND REACTIVITY

- **Reactivity**: No hazards to be specially mentioned.

- **Chemical stability**: Stable under recommended storage conditions.

- **Possibility of hazardous reactions**: Dust may form explosive mixture in air.

- **Conditions to avoid**: Heat.

- **Incompatible materials**: Strong acids and strong bases
  - Strong oxidizing agents

- **Hazardous decomposition products**: No decomposition if used as directed.

### SECTION 11. TOXICOLOGICAL INFORMATION

- **Acute oral toxicity**: LD$_{50}$ (Rat): $> 5,000$ mg/kg (Directive 67/548/EEC, Annex V, B.1.)

- **Acute dermal toxicity**: LD$_{50}$ (Rat): $> 5,000$ mg/kg

- **Skin irritation**: No skin irritation (Rabbit, OECD Test Guideline 404)

- **Eye irritation**: No eye irritation (Rabbit, OECD Test Guideline 405)

  - Dust contact with the eyes can lead to mechanical irritation.

- **Sensitisation**: Did not cause sensitization. (Mouse, Local Lymph Node Assay (LLNA), OECD Test Guideline 429)

- **Carcinogenicity**: (Rat, Oral)
  - No indication for carcinogenicity known.
Genotoxicity in vitro: not mutagenic (Ames test, OECD Test Guideline 471)

Reproductive toxicity: No indication for adverse effects on fertility known.

STOT - single exposure (Acute exposure): The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure: This information is not available.

Aspiration toxicity: No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish: Danio rerio (zebra fish)
LC50 > 5,000 mg/l (nominal concentration) (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Water flea)
EC50 (48 h) > 100 mg/l (nominal concentration) (OECD Test Guideline 202)
NOEC (48 h) >= 100 mg/l (nominal concentration)

Toxicity to bacteria: activated sludge
NOEC (3 h) 1,000 mg/l (OECD Test Guideline 209)

Persistence and degradability

Biodegradability: Readily biodegradable.
ca. 72 % (28 d) (OECD Test Guideline 301B)

Bioaccumulative potential

Partition coefficient: n-octanol/water: log Pow -3.14 (calculated (citation from literature))

Mobility in soil

Distribution among environmental compartments: No data available

Results of PBT and vPvB assessment

Assessment: The substance does not fullfill the PBT criteria.
The substance does not fullfill the vPvB criteria.
Other adverse effects

| Regulation | 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances |
| Remarks | This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). |

Additional ecological information: There is no data available for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

| Disposal methods |
| User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or other national / local legislation. |
| Offer surplus and non-recyclable solutions to a licensed disposal company. |
| Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. |

SECTION 14. TRANSPORT INFORMATION

International Regulation

| UNRTDG | Not regulated as a dangerous good |
| IATA-DGR | Not regulated as a dangerous good |
| IMDG-Code | Not regulated as a dangerous good |

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

| 49 CFR | Not regulated as a dangerous good |

SECTION 15. REGULATORY INFORMATION

TSCA list: Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RO.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards**
: No SARA Hazards

**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.

**Clean Air Act**
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**
This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.

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

**Pennsylvania Right To Know**

- **allantoin**
  - 97-59-6
  - 90 - 100 %

**New Jersey Right To Know**

- **allantoin**
  - 97-59-6
  - 90 - 100 %

The components of this product are reported in the following inventories:

**TSCA**
: On TSCA Inventory
SECTION 16. OTHER INFORMATION

Further information

**NFPA:**

- **Flammability:** 1
- **Health:** 1
- **Reactivity:** 0

**HMIS III:**

- **HEALTH:** 0
- **FLAMMABILITY:** 1
- **PHYSICAL HAZARD:** 1

Special hazard.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.