	<h1>SAFETY DATA SHEET</h1>	Page : 1
		Revised edition no : 0
		Date : 24 / 11 / 2017
		Supersedes : 31 / 7 / 2014
<h2>L-Asparagine monohydrate</h2>		<h3>DOC0(114-117)</h3>

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

**1.1. Product identifier**

**Identification of the product** : Raw material  
**Product code** : DOC0(114-117)  
**Trade name** : L-Asparagine monohydrate  
**CAS number** : 005794-13-8

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

**1.2.1 Relevant identified uses** : For research purposes only  
**1.2.2 Uses advised against** : No additional information available

**1.3. Details of the supplier of the safety data sheet**

**Company identification** : Formedium Ltd.  
 Unit 1B Hunstanton Commercial Park  
 Norfolk PE365JQ  
 Tel: +44(0)1485 609069  
 Fax: +44(0)1485 600510  
 E-mail: info@formedium.com

**1.4. Emergency telephone number**

**Emergency telephone number** : Tel: +44(0)1485 609069 (local time : 9.00 to 17.00)  
 National Poison Information Centre : Europe UK : +44 0845 4647 (this service is only available to health professionals)  
 See [www.toxbase.org](http://www.toxbase.org) 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**

Not regulated


**2.2. Label elements**

**Labelling according to Regulation (EC) No. 1272/2008**

Hazards pictograms code : None  
 Precautionary statements : None

**2.3 Other hazards**

None under normal conditions.

	<h1>SAFETY DATA SHEET</h1>	Page : 2
		Revised edition no : 0
		Date : 24 / 11 / 2017
		Supersedes : 31 / 7 / 2014
<h2>L-Asparagine monohydrate</h2>		<h3>DOC0(114-117)</h3>

**SECTION 3 Composition/information on ingredients**
**3.1 Substance / Preparation**

Molecular weight g/mol : 150.14  
 Structural formula: : C<sub>4</sub>H<sub>8</sub>N<sub>2</sub>O<sub>3</sub>.H<sub>2</sub>O

Substance name:	Contents	CAS No:	EC No:	Annex No:	Ref REACH	Classification
L-Asparagine monohydrate	> 98 %	5794-13-8	200-735-9	--	--	--

**SECTION 4 First aid measures**
**4.1. Description of first aid measures**

- Inhalation** : Remove victim to fresh air.
- Skin contact** : Wash skin with mild soap and water.
- Eye contact** : Rinse with water.
- Ingestion** : Rinse mouth.

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

Symptoms and effects, both acute and delayed. : No data available.

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

Medical attention and special treatment needed. : No data available.

**SECTION 5 Fire-fighting measures**
**5.1. Extinguishing media**


Suitable extinguishing media : Water spray, Carbon dioxide (CO<sub>2</sub>) or Dry powder.

**5.2. Special hazards arising from the substance or mixture**

When heated to decomposition, emits toxic fumes. CO<sub>x</sub> NO<sub>x</sub>

**5.3. Advice for firefighters**

- Protection against fire** : Wear proper protective equipment.
- Special procedures** : Avoid (reject) fire fighting water to enter environment.

	<h1>SAFETY DATA SHEET</h1>	Page : 3
		Revised edition no : 0
		Date : 24 / 11 / 2017
		Supersedes : 31 / 7 / 2014
<h2>L-Asparagine monohydrate</h2>		<b>DOC0(114-117)</b>

**SECTION 6 Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Wear suitable protective equipment

**6.2 . Environmental precautions**

Prevent entry to sewers and public waters.

**6.3. Methods and material for containment and 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**

For disposal see section 13.

**SECTION 7 Handling and storage**

**7.1. Precautions for safe handling**

Minimize generation of dust.  
Store in a dry, well ventilated area.

**7.2. Conditions for safe storage, including any incompatibilities**

Store at room temperature.

**7.3. Specific end use(s)**

For research purposes only

**SECTION 8 Exposure controls/personal protection**


**8.1. Control parameters**

**8.2. Exposure controls**

- **Eye protection** : Safety glasses.
- **Skin protection** : In case of possible repeated skin contact wear protective clothing.
- **Hand protection** : In case of repeated or prolonged contact wear gloves
- **Respiratory protection** : P1 where excessive dust may result, wear approved mask.

**SECTION 9 Physical and chemical properties**


- **Appearance**  
**Appearance** : Crystals, Powder.  
**Colour** : White
- **Odour**  
**Odour** : Not established.

	<h1>SAFETY DATA SHEET</h1>	Page : 4
		Revised edition no : 0
		Date : 24 / 11 / 2017
		Supersedes : 31 / 7 / 2014
<h2>L-Asparagine monohydrate</h2>		<b>DOC0(114-117)</b>

### SECTION 9 Physical and chemical properties (continued)

- **Odour threshold**  
Odour threshold : Not established.
- **pH**  
pH value : 4 – 5.5 (20 g/L at 20°C)
- **Melting point / Freezing point**  
Melting point (°C) : 234
- **Initial boiling point – boiling range**  
Boiling point (°C) : No data available.
- **Flash point**  
Flash point (°C) : Not established.
- **Evaporation rate**  
Evaporation rate (ether =1) : No data available.
- **Flammability**  
Flammability range (vol % in air) : The product is not flammable.
- **Explosion limits (lower – upper)**  
Explosion limits : No data available.
- **Vapour pressure**  
Vapour pressure : Not established.
- **Vapour density**  
Relative vapour density (air=1) : No data available.
- **Relative density**  
Density : No data available.
- **Solubility**  
Solubility in water : 30 g/L at 20°C
- **Partition coefficient : n-octanol / water**  
Log P octanol / water at 20°C : - 3.82
- **Auto-ignition temperature**  
Auto-ignition temperature (°C) : No data available.
- **Thermal decomposition**  
Thermal decomposition (°C) : No data available.
- **Viscosity**  
Viscosity : No data available.
- **Explosive properties**  
Explosive properties : Not established.
- **Oxidising properties**  
Oxidising properties : Not established.

#### 9.2 Other information

	<h1>SAFETY DATA SHEET</h1>	Page : 5
		Revised edition no : 0
		Date : 24 / 11 / 2017
		Supersedes : 31 / 7 / 2014
<h2>L-Asparagine monohydrate</h2>		<h3>DOC0(114-117)</h3>

### SECTION 10 Stability and reactivity

#### **10.1. Reactivity**

Stable under normal conditions.

#### **10.2. Chemical stability**

**Stability**

: Stable under recommended storage conditions.

#### **10.3. Possibility of hazardous reactions**

This product is non-hazardous.

#### **10.4. Conditions to avoid**

**Conditions to avoid**

: Moisture.

#### **10.5. Incompatible materials**

Strong oxidizers.

#### **10.6. Hazardous decomposition products**

**Hazardous decomposition products**

: NO<sub>x</sub>  
CO<sub>x</sub>  
May liberate toxic gases.

### SECTION 11 Toxicological information

#### **11.1. Information on toxicological effects**

**Toxicity Information**

: Not established.

-Inhalation

: May cause irritation to the respiratory tract.

--Dermal

: May cause skin irritation.

-- Ocular

: May cause eye irritation.

-Rat oral LD50 (mg/Kg)

: No data available.

### SECTION 12 Ecological information

#### **12.1. Toxicity**

No data available.

#### **12.2. Persistence - degradability**

No data available.

#### **12.3. Bioaccumulative potential**

None under normal conditions.

#### **12.4. Mobility in soil**

No data available.

#### **12.5. Results of PBT and vPvB assessment**


No data available.

#### **12.6. Other adverse effects**

No data available.

**Environmental precautions**

: Prevent entry to sewers and public waters.  
Avoid release to the environment.

	<h1>SAFETY DATA SHEET</h1>	Page : 6
		Revised edition no : 0
		Date : 24 / 11 / 2017
		Supersedes : 31 / 7 / 2014
<h2>L-Asparagine monohydrate</h2>		<h3>DOC0(114-117)</h3>

### SECTION 13 Disposal considerations

#### 13.1. Waste treatment methods

**General** : This product is not hazardous.

**Special precautions** : When not empty dispose of this container at hazardous or special waste collection point.

### SECTION 14 Transport information

#### 14.1. UN Number

Not applicable.

**General information** : Not classified as dangerous in the meaning of transport regulations.

#### 14.2. UN Proper shipping name

Not applicable.

#### 14.3. Transport Hazard Class(es)

Not applicable.

#### 14.4. Packing group

Not applicable.

#### 14.5. Environmental hazards

Not applicable.

#### 14.6. Special precautions for user

Not applicable

### SECTION 15 Regulatory information

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

This safety data sheet complies with the requirements of Regulation (EU) No. 2015/830

#### 15.2. Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

### SECTION 16 Other information

**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. Formedium Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.

**Revision** : Complete SDS revision

End of document