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		Date : 24 / 11 / 2017
		Supersedes : 31 / 7 / 2014
L-Arginine		DOC0(106-109)

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(106-109)
 Trade name : L-Arginine
 EC-No : 200-811-1
 CAS number : 000074-79-3
 Formula : C6H14N4O2

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 for a local poison centre

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008

Serious eye damage / eye irritation (Category 2) H319
 May cause respiratory irritation (Category 3) H335
 For the full text of the H-Statements mentioned in this section, see Section 16.

2.2. Label elements

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

Signal Word : Warning
 Hazardous ingredients : L-Arginine
 Hazard statement(s) : H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 Precautionary statement(s) : P280 Wear protective gloves, protective clothing, eye protection, face protection.
 P305 + P351 IF IN EYES : Rinse cautiously with water for several minutes.
 P337 + P313 If eye irritation persists : Get medical advice / attention.



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SECTION 2 Hazards identification (continued)

2.3. Other hazards

No additional information available.

SECTION 3 Composition/information on ingredients

3.1 Substance / Preparation

Name: Arginine (L-)
CAS-No.: 000074-79-3
EC-No.: 200-811-1

Hazardous ingredients according to Regulation (EC) No. 1272/2008

Component:	Concentration	CAS No	EC No	Classification
L-Arginine	>= 98.5%	74-79-3	200-811-1	Serious eye damage / eye irritation H319

For the full text of the H-Statements mentioned in this Section, see section 16.

SECTION 4 First aid measures

4.1. Description of first aid measures

If inhaled	Assure fresh air breathing.
In case of skin contact	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
In case of eye contact	Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
If swallowed	Rinse mouth.

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

No additional information available.

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

No additional information available.

SECTION 5 Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray, alcohol resistant foam, dry chemical powder or carbon dioxide (CO₂).

5.2. Special hazards arising from the substance or mixture

Under fire conditions, hazardous fumes will be present. CO_x NO_x.

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Prevent fire fighting water from entering the environment.

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SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- 6.1.** General measures **For non-emergency personnel**
Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.
- 6.1.1.** Measures in case of dust release. **For non-emergency personnel**
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. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : 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

Ensure good ventilation of the work station. Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Store in a dry, well-ventilated area. Store at ambient temperature.
Keep container tightly closed. Protect from direct sunlight.

7.3. Specific end use(s)

For research purposes only

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection:

Type	Material	Permeation	Thickness (mm)	Standard
Gloves	Nitrile rubber (NBR)	6 (>480 minutes)	0.11	EN374

Eye protection:

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU).

Skin and body protection:

Wear suitable protective clothing. 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.

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Section 8: Exposure controls / personal protection (continued)

Respiratory protection

Dust production: Dust mask with filter type P1.

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Crystals. Powder.
Colour	White.
Molecular mass	174.2 g/mol
Odour	No data available
Odour Threshold	No data available
pH	No data available
pH solution	10.5 – 12 100 g/L
Melting point	216 – 222 °C
Freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Relative evaporation rate	No data available
Flammability (solid,gas)	No data available
Vapour pressure	No data available
Relative vapour density at 20°C	No data available
Relative density	No data available
Water solubility	150 g/L
Log Pow	No data available
Auto-ignition temperature	No data available
Decomposition temperature	244 °C
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Explosive limits	No data available

9.2. Other safety information

No data available

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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

Light (daylight). Moisture.

10.5. Incompatible materials

Strong oxidizers. Strong acids. Alkali.

10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes.— Carbon oxides (COx), Nitrogen oxides (NOx).

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity	LD50 oral – Rat – >5110 mg/kg
Skin corrosion / irritation	Not classified
Serious eye damage / eye irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity	Single exposure – Not classified Repeated exposure – Not classified
NOAEL (oral rat 90 days	3565.1 mg/kg bodyweight / day
Aspiration hazard	Not classified

SECTION 12 Ecological information

12.1. Toxicity

LC50 fish 1 : 2.8 mg/l Brachydanio rerio (zebra fish).

12.2. Persistence - degradability

Biodegradation : 60%.

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

Moderately toxic to aquatic life. Prevent entry to sewers and public waters. Avoid release to the environment.

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SECTION 13 Disposal considerations

13.1. Waste treatment methods

Dispose of this material and its containers to 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 (EC) No. 2015/830.

15.2. Chemical Safety Assessment

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

SECTION 16 Other information

Full text of H- and EUH-statements referred to under sections 2 and 3.

Eye irritation 2	Eye irritation. Category 2
H319	Causes eye irritation.
Respiratory tract irritation	Specific Target Organ Toxicity. STOT SE3
H335	May cause respiratory irritation.

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

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