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|  | <h1 style="margin: 0;">SAFETY DATA SHEET</h1> | Page : 1 |
| | | Revised edition no : 0 |
| | | Date : 26 / 10 / 2017 |
| | | Supersedes : 31 / 7 / 2014 |
| <h2 style="margin: 0;">L-Valine</h2> | | <h3 style="margin: 0;">DOC0(194-197)</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(194-197)
Trade name : L-Valine
CAS number : 000072-18-4

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
 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. :.

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SECTION 3 Composition/information on ingredients

3.1 Substance / Preparation

Molecular weight g/mol : 117.1
 Structural formula: : C5H11NO2

| Substance name: | Contents | CAS No: | EC No: | Annex No: | Ref REACH | Classification |
|-----------------|----------|---------|-----------|-----------|-----------|----------------|
| L-Valine | > 98.5 % | 72-18-4 | 200-773-6 | -- | -- | -- |

SECTION 4 First aid measures

4.1. Description of first aid measures

- General information** : Seek medical attention if ill effect or irritation develops.
- 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 : Alcohol foam, Water spray, Carbon dioxide (CO2) or Dry powder.

5.2. Special hazards arising from the substance or mixture

Under fire conditions, hazardous fumes will be present. COx, NOx

5.3. Advice for firefighters

Protection against fire : Wear proper protective equipment.

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SECTION 6 Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures

General precautions : Avoid raising powdered materials into airborne dust.

Personal precautions : Wear suitable protective clothing.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and 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

Store in a dry, well ventilated area.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed and protected from light.
Store at room temperature.

7.3. Specific end use(s)

For research purposes only

SECTION 8 Exposure controls/personal protection

8.1. Control parameters : No data available.

8.2. Exposure controls

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

SECTION 9 Physical and chemical properties


- **Appearance**

Appearance : Powder.

Colour : White

- **Odour**

Odour : Weak.

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SECTION 9 Physical and chemical properties (continued)

- Odour threshold
Odour threshold : Not established.
- pH
pH value : No data available.
- Melting point / Freezing point
Melting point (°C) : 295 - 315
- Initial boiling point – boiling range
Boiling point (°C) : No data available.
- Flash point
Flash point (°C) : No data available.
- Evaporation rate
Evaporation rate (ether =1) : No data available.
- Flammability
Flammability range (vol % in air) : No data available.
- 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
Relative Density : 1.23 (g/cm³)
- Solubility
Solubility in water : 85 (g/L at 20°C)
- Partition coefficient : n-octanol / water
Log P octanol / water at 20°C : Not established.
- 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 : No data available.

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SECTION 10 Stability and reactivity
10.1. Reactivity

No data available.

10.2. Chemical stability

Stability : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

Conditions to avoid : Heat.

10.5. Incompatible materials

Material to avoid. : Strong oxidisers.

10.6. Hazardous decomposition products

Hazardous decomposition products : When heated to decomposition, emits dangerous fumes.

SECTION 11 Toxicological information
11.1. Information on toxicological effects

- Inhalation : Dust from this product may cause respiratory irritation.
- Dermal : May cause skin irritation.
- Other : See actual entry in RTECS for complete information. MA2275100.
- Rat oral LD50 (mg/Kg) : 5390

SECTION 12 Ecological information
12.1. Toxicity

No data available.

12.2. Persistence - degradability

No data available.

12.3. Bioaccumulative potential

No data available.

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.

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SECTION 13 Disposal considerations

13.1. Waste treatment methods

General

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

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 datasheet 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

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