

L-Serine**DOC0(178-181)****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(178-181)
Trade name : L-Serine
CAS number : 000056-45-1

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.
King's Lynn, England, PE31 6DJ
Tel: +44(0)1485 609069
Web: www.Formedium.com
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)
NHS Direct 111 (UK, 24 hours), 112 (EU, 24 Hours)

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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L-Serine**DOC0(178-181)****SECTION 3 Composition/information on ingredients****3.1 Substance / Preparation**

Molecular weight g/mol : 105.1
Structural formula: : C3H7NO3

Substance name:	Contents	CAS No:	EC No:	Annex No:	Ref REACH	Classification
L-Serine	> 98.5 %	56-45-1	200-274-3	--	--	--

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

General information : Seek medical attention if ill effects 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.

Special procedures : Avoid (reject) fire-fighting water to enter environment.

L-Serine**DOC0(178-181)****SECTION 6 Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****Personal precautions** : Wear suitable protective clothing.**6.2 . Environmental precautions****Environmental precautions** : Prevent entry to sewers and public waters.**6.3. Methods and material for containment and cleaning up****Clean up methods** : 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****General** : Store in a dry, well ventilated area.**7.2. Conditions for safe storage, including any incompatibilities****Storage** : Store at room temperature.
Keep container tightly closed and protected from light.**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** : P1 Where excessive dust may result, wear approved mask.

SECTION 9 Physical and chemical properties

- **Appearance**

Appearance : Crystals, Powder.**Colour** : White

- **Odour**

Odour : Odourless.

L-Serine

DOC0(178-181)

SECTION 9 Physical and chemical properties (continued)

• <u>Odour threshold</u> Odour threshold	: Not established.
• <u>pH</u> pH value	5.2 – 6.2 (10g/100mL)
• <u>Melting point / Freezing point</u> Melting point (°C)	Circa 228
• <u>Initial boiling point – boiling range</u> Boiling point (°C)	No data available.
• <u>Flash point</u> Flash point (°C)	Not applicable.
• <u>Evaporation rate</u> Evaporation rate (ether =1)	No data available.
• <u>Flammability</u> Flammability range (vol % in air)	No data available.
• <u>Explosion limits (lower – upper)</u> Explosion limits	No data available.
• <u>Vapour pressure</u> Vapour pressure	Not established.
• <u>Vapour density</u> Relative vapour density (air=1)	No data available.
• <u>Relative density</u> Relative density	No data available.
• <u>Solubility</u> Solubility in water	250 – 260 g/L - Good
• <u>Partition coefficient : n-octanol / water</u> Log P octanol / water at 20°C	Not established.
• <u>Auto-ignition temperature</u> Auto-ignition temperature (°C)	No data available.
• <u>Thermal decomposition</u> Thermal decomposition (°C)	No data available.
• <u>Viscosity</u> Viscosity	No data available.
• <u>Explosive properties</u> Explosive properties	Not established.
• <u>Oxidising properties</u> Oxidising properties	Not established.

9.2 Other information

Other data : No data available.

L-Serine**DOC0(178-181)****SECTION 10 Stability and reactivity****10.1. Reactivity**

Stable under normal conditions.

10.2. Chemical stability**Stability**

Stable under normal conditions.

10.3. Possibility of hazardous reactions**Hazardous reactions**

This product is not hazardous.

10.4. Conditions to avoid**Conditions to avoid**Moisture.
Heat.
Direct sunlight.**10.5. Incompatible materials****Materials to avoid**

Strong oxidizers.

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****Rat oral LD50 (mg/Kg)**

14000

11.2. Additional Information**Endocrine disrupting properties :**

The Substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12 Ecological information**12.1. Toxicity**

No data available.

12.2. Persistence - degradability

Product is biodegradable.

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**Environmental precautions**Prevent entry to sewers and public waters.
Avoid release to the environment.**12.7. Endocrine disrupting properties**

The Substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

L-Serine**DOC0(178-181)****SECTION 13 Disposal considerations****13.1. Waste treatment methods****Special precautions**

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