

L-GLUTAMIC ACID
CAS No 56-86-0**MATERIAL SAFETY DATA SHEET**
SDS/MSDS**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : L-Glutamic Acid

CAS-No. : 56-86-0

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheetCompany : Pallav Chemicals & Solvents Pvt. Ltd
253, Shiv Shakti Industrial Estate, Opp Mittal Estate
Andheri Kurla Road, Andheri (E), Mumbai - 400050
INDIATelephone : +91 22 4928 4000
Email : sales@pallavchemicals.com**1.4 Emergency telephone number**

Emergency Phone # : +91 22 4928 4000 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Not a hazardous substance or mixture.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients**3.1 Substances**Synonyms : Glu
(S)-2-Aminopentanedioic acidFormula : C₅H₉NO₄
Molecular weight : 147.13 g/mol
CAS-No. : 56-86-0
EC-No. : 200-293-7

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas.

For personal protection see section 8.

6.2 Environmental precautions

No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510): Non Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

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.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance le (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

No special environmental precautions required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---|---|
| a) Appearance | Form: crystalline |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | Melting point/range: 205 °C |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | No data available |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | The product is not flammable. - Flammability (solids) |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapour pressure | No data available |
| l) Vapour density | No data available |
| m) Relative density | 1.54 g/cm ³ at 20 °C |
| n) Water solubility | 8.64 g/l at 25 °C - soluble |

- | | |
|---|---|
| o) Partition coefficient: n-octanol/water | log Pow: < -4 at 20 °C |
| p) Auto-ignition temperature | not auto-flammable |
| q) Decomposition temperature | No data available |
| r) Viscosity | No data available |
| s) Explosive properties | Not explosive |
| t) Oxidizing properties | The product has been shown not to be oxidizing in a test following Directive 67/548/EEC (Method A17, Oxidizing properties). |

9.2 Other safety information

Surface tension 74.2 mN/m at 20 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - > 5,110 mg/kg (Glutamic acid)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg (Glutamic acid)
(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit (Glutamic acid)

Result: No skin irritation - 4 h

(Directive 67/548/EEC, Annex V, B.4.)

Serious eye damage/eye irritation

Eyes - Rabbit (Glutamic acid)

Result: No eye irritation - 72 h

(OECD Test Guideline 405)

Respiratory or skin sensitisation

Maximisation Test - Guinea pig (Glutamic acid)

Result: Does not cause skin sensitisation.

(Directive 67/548/EEC, Annex V, B.6.)

Germ cell mutagenicity

No data available(Glutamic acid)

Ames test(Glutamic acid)

S. typhimurium

Result: negative

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.

Reproductive toxicity

No data available(Glutamic acid)

Specific target organ toxicity - single exposure

No data available(Glutamic acid)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available(Glutamic acid)

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Glutamic acid)

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish static test LC50 - Cyprinus carpio (Carp) - > 100 mg/l - 96 h(Glutamic acid)
(OECD Test Guideline 203)

Toxicity to daphnia and static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h(Glutamic
other aquatic acid)

invertebrates (OECD Test Guideline 202)

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata (green algae) - > 31 mg/l -
72 h(Glutamic acid)
(OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d(Glutamic acid)
Result: 97 % - Readily biodegradable.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available(Glutamic acid)

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

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 (EC) No. 1907/2006.

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. Pallav Chemicals & Solvents Pvt. Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.pallavchemicals.com for additional terms and conditions of sale.