



SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2020

Date Updated: November 06, 2020

SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION-----

Product Name L-Glutamic acid
Product Code(s) GB0221
Recommended Use For Laboratory Research Use Only
Not for Human or Animal Drug Use

Supplier Bio Basic Inc.
Address 20 Konrad Crescent, Markham, Ontario,
Canada, L3R 8T4
Telephone (905) 474 4493
Fax (905) 474 5794
For Chemical Emergency Phone# (416) 995 9730

SECTION 2. ----- HAZARDS IDENTIFICATION -----

GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Short-term (acute) aquatic hazard (Category 3), H402

GHS Label elements, including precautionary statements

Pictogram none
Signal word none
Hazard statement(s)
H402 Harmful to aquatic life.

Precautionary statement(s)
P273 Avoid release to the environment.
P501 Dispose of contents/ container to an approved waste disposal
plant.

SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Chemical Name	EC No.	CAS-No	Weight
Glu(S)-2-Aminopentanedioic acid	200-293-7	56-86-0	147.13 g/mol

SECTION 4. ----- FIRST-AID MEASURES -----

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

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. Consult a physician

SECTION 5. ----- FIRE FIGHTING MEASURES -----

Suitable extinguishing media

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

Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx)

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Explosion data - sensitivity to mechanical impact

no data available

Explosion data - sensitivity to static discharge

no data available

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES -----

Personal precautions

Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided..

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7. ----- HANDLING AND STORAGE -----

Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

Melting point/freezing point	Melting point/range: 205 °C (401 °F)
Boiling point	- OECD Test Guideline 103decomposition below boiling point
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Flammability	The product is not flammable. - Flammability (solids)
Vapour pressure	< 0.1 hPa at 20 °C (68 °F) - OECD Test Guideline 104
Density	no data available
Water solubility	8.64 g/l at 25 °C (77 °F) - soluble
Partition coefficient: n-octanol/water	log Pow: < -4 at 20 °C (68 °F) - OECD Test Guideline 107 – bioaccumulation is not expected
Relative density	1.54 g/cm ³ at 20 °C (68 °F) –
Auto-ignition temperature	does not ignite
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available
Surface tension	74.2 mN/m at 1g/l at 20 °C (68 °F) - OECD Test Guideline 115

SECTION 10. -----STABILITY AND REACTIVITY -----

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides, Sodium oxides

Other decomposition products - No data

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

Acute toxicity

LD50 Oral - Rat - male and female - > 5,110 mg/kg Remarks: (ECHA)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 402)

No data available

Skin corrosion/irritation

Skin - Rabbit
Result: No skin irritation - 4 h
(Regulation (EC) No. 440/2008, Annex, B.4)

Serious eye damage/eye irritation

Eyes - Rabbit
Result: No eye irritation
(Regulation (EC) No. 440/2008, Annex, B.5)

Respiratory or skin sensitisation

Maximisation Test - Guinea pig
Result: negative
(Regulation (EC) No. 440/2008, Annex, B.6)

Germ cell mutagenicity

Ames test
Escherichia coli/Salmonella typhimurium
Result: negative
OECD Test Guideline 474
Mouse - male - Bone marrow
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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available
Acute oral toxicity - Possible damages:, Nausea

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Additional Information

Repeated dose toxicity - Dog - male and female - Oral - 90 - 92 Days - No observed adverse effect level - >= 1,500 mg/kg
(in analogy to similar products)
RTECS: Not available

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

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately. This is a non-essential amino acid that occurs in many forms in natural protein. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

Toxicity

Toxicity to fish	static test LC50 - Cyprinus carpio (Carp) - > 100 mg/l (OECD Test Guideline 203)- 96 h
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l (OECD Test Guideline 202) - 48 h
Toxicity to algae	static test EC50 - Pseudokirchneriellasubcapitata (green algae) – 27mg/l - 72 h(OECD Test Guideline 201)

Persistence and degradability

Biodegradability aerobic - Exposure time 28 d
Result: 97 % - Readily biodegradable.
(OECD Test Guideline 301E)

Ratio BOD/ThBOD 64 %

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life
No data available

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

Product

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

Contaminated packaging

Dispose of as unused product.

SECTION 14. ----- TRANSPORT INFORMATION -----

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15. ----- REGULATORY INFORMATION -----

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

SECTION 16. ----- OTHER INFORMATION -----

Further information: no limited for paper copy, just for internal uses.
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Issuing Date:06-Nov-2020

End of SDS



CERTIFICATE OF ANALYSIS

Product	L-GLUTAMIC ACID, FREE ACID FCC
Grade	High Purity
Product Code	GB0221
Formula	C ₅ H ₉ NO ₄
MW	147.13
CAS#	56-86-0
Lot No	

Test Items	Specifications	Results
Appearance	White crystals or crystalline powder	
Identification (IR)	Passes test	
Assay	99.0%-100.5%	
pH	3.0 ~ 3.5	
Specific Rotation(Dried)	+31.5°-+32.5°	
Chloride	≤0.02%	
Ammonium	≤0.02%	
Sulfate	≤0.02%	
Iron	≤10ppm	
Heavy Metals (as Pb)	≤10ppm	
Arsenic (as As)	≤ 1ppm	
Other Amino-acid	Passes test	
State of solution	Clear and colorless	
	≥98%	
Loss on Drying	≤0.1%	
Residue on ignition	≤0.1%	

Storage: Store at room temperature. Protect from moisture.