1. Identification

Production Name: L-Glutamine

Catalog Number: G010

Company: Caisson Laboratories

Address: 836 South 100 East, Smithfield UT 84335

Telephone: 435.755.7615

Fax: 435.755.7617

Emergency Contact: CHEMTREC 800.424.9300 (703.527.3887)

Recommended Use: For research and laboratory use only.

Restrictions on Use: This product is intended for research and laboratory use only. This product is not to be used as human or animal therapeutics, cosmetics, pesticidal products, food additives, or as household chemicals.

2. Hazard(s) Identification

Classification of the Substance or Mixture

GHS Classification: Not a hazardous substance or mixture

GHS Label Elements, Including Precautionary Statements

Signal Word: Not Hazardous

Hazard Statements:

Not a hazardous substance or mixture

Precautionary Statements:

Not a hazardous substance or mixture

Pictograms: N/A

3. Composition/Information on Ingredients

Synonyms: L-Glutamic Acid 5-amide; gln; Q

Formula: $C_5H_{10}N_2O_3$

Molecular Weight: 146.14 g/mol

CAS-No: 56-85-9

EC-No: 200-292-1

4. First-Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Route of Exposure

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

In Case of Skin Contact: Wash area thoroughly with soap and water.

In Case of Eye Contact: In case of contact with eyes, flush with copious amounts of water.

If Inhaled: Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR).

Most Important Symptoms and Effects, Both Acute and Delayed: The most important known symptoms and effects are described section 2 (Hazards Identification) and/or in section 11 (Toxicological Information).

Recommendation for Immediate Medical Care and Special Treatment Needed: No Data Available

5. Fire-Fighting Measures

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Protective Equipment and Precautions for Fire-Fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Special Hazards Arising from the Substance or Mixture: Carbon oxides, Nitrogen oxides (NOx). Combustible.

Additional Information: No Data Available

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

For personal protection see section 8.

Environmental Precautions: No special environmental precautions required. See section 2 (Hazards Identification) for more information.

Methods and Material for Containment and Cleanup: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Precautions for Safe Handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

Conditions for Safe Storage: Keep container tightly closed in a dry and well-ventilated place.

Recommended Storage Temperature: 15 to 30 °C

Incompatibilities: Strong oxidizing agents

8. Exposure controls / Personal Protection

OSHA Permissible Exposure Limits (PELs): Contains no substances with occupational exposure limit values.

ACGIH Threshold Limit Values (TLVs): Contains no substances with occupational exposure limit values.

Engineering controls: Practice general industrial hygiene. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment (PPE):

Eye/face protection: Face shield or appropriate safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique 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.

Respiratory protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Body protection: Wear lab coat, gown, or coveralls to protect from exposure.

9. Physical and Chemical Properties

Appearance: White Cyrstalline Powder

pH: 4.0 – 6.0 (2.9%, H_2O)

Solubility: Soluble in Water

Specific Gravity: No Data Available

Melting Range: 185 °C (365 °F)

Odor: No Data Available

Odor Threshold: No Data Available

Viscosity: No Data Available

Relative Density: No Data Available

Evaporation Rate: No Data Available

Initial Boiling Point and Boiling Range: No Data Available

Flash Point: No Data Available

Flammability (Solid, gas): No Data Available

Flammability Upper/Lower Limits: No Data Available

Partition Coefficient: log Pow: -4.609

Vapor Density: No Data Available

Vapor Pressure: No Data Available

Auto-ignition Temperature: No Data Available

Decomposition Temperature: No Data Available

10. Stability and Reactivity

Reactivity: No Data Available

Chemical Stability: Stable under recommended storage conditions.

Possibilities of Hazardous Reactions: No Data Available

Conditions to Avoid: No Data Available

Incompatible Materials: Strong oxidizing agents

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

In the event of fire: see section 5

11. Toxicological Information:

Toxicity: No Data Available

Carcinogenicity:

> **NTP**: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
>
> **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.
>
> **OSHA**: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity: No Data Available

Symptoms Associated with Overexposure: No Data Available

Specific Target Organ Toxicity – Single Exposure: No Data Available

Specific Target Organ Toxicity – Repeated Exposure: No Data Available

Target Organs: None Identified

Medical Conditions Aggravated by Exposure: None Identified

Routes of Entry: No Data Available

NIOSH/RTECS: Not Available

12. Ecological Information

Toxicity:

Toxicity to daphnia and other aquatic invertebrates: Semi-static test EC50 – Dpahnia magna (Water flea) – > 100 mg/L – 48 h (OECD Test Guideline 202)

Toxicity to algae: Growth inhibition ErC50 – Desmodesmus subspicatus (green algae) – > 100 mg/L – 72 h (OECD Test Guideline 301C)

Persistence and Degradability:

Biodegradability: Result: 77 % - Readily biodegradable. (OECD Test Guideline 301C)

Bioaccumulative Potential: No Data Available

Mobility in Soil: No Data Available

Results of PBT and vPvB: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other Adverse Effects: No Data Available

13. Disposal Considerations

Disposal of Product: Dispose in accordance with all applicable federal, state, and local environmental regulations.

Disposal of Packaging: Dispose of as unused product.

14. Transport Information

DOT (US):

Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)

UN/NA number: N/A Class: N/A Packaging group: N/A Hazard Label: N/A

Reportable Quantity (RQ): N/A

Poison Inhalation Hazard: N/A

IMDG:

Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)

UN number: N/A Class: N/A Packaging group: N/A Hazard Label: N/A

IATA:

Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)

UN Number: N/A Class: N/A Packaging group: N/A Hazard Label: N/A

15. Regulatory Information

TSCA: Listed

SARA Title lll:

Section 302 (EHS) Ingredients: No

Section 313 Ingredients: No

Section 304 (EHS/CERCLA) Ingredients: No

Section 311/312 Hazard: No

16. Other Information

HMIS Rating

Health Hazard: 0

Chronic Health Hazard: -

Flammability: 0

Physical Hazard: 0

NFPA Rating

Health Hazard: 0

Fire Hazard: 0

Reactivity: 0

Special Hazard: -

Further Information: All chemicals may pose unknown hazards and should be used with caution. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Caisson Laboratories, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.

SP-CN-P026 Revision Change Summary:

Rev.	Date	CR#	Approved	Change description
00	**25-Aug-20**	3565	E. Welker	New Document