according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

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1 Identification

· Product identifier

· Trade name: L-Glutamic Acid, ACS Grade

· Product code: GL1020

• **CAS Number:** 56-86-0

· Recommended use and restriction on use

· Recommended use: Laboratory chemicals

Restrictions on use: No relevant information available.

Details of the supplier of the Safety Data Sheet

· Manufacturer/Supplier:

AquaPhoenix Scientific, Inc.

860 Gitts Run Road

Hanover, PA 17331 USA

Tel +1 (717)632-1291

Toll-Free: (866)632-1291

info@aquaphoenixsci.com

Distributor:

AquaPhoenix Scientific

860 Gitts Run Road,

Hanover, PA 17331 (717) 632-1291

· Emergency telephone number:

ChemTel Inc.

(800)255-3924 (North America)

+1 (813)248-0585 (International)

2 Hazard(s) identification

· Classification of the substance or mixture

Combustible Dust May form combustible dust concentrations in air.

- Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms: None.
- Signal word:

None.

Warning

Hazard statements:

May form combustible dust concentrations in air.

- · Precautionary statements: None.
- Other hazards There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description

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56-86-0 L -Glutamic acid

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4 First-aid measures

- Description of first aid measures
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Brush off loose particles from skin.

If skin irritation is experienced, consult a doctor.

· After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Seek immediate medical advice.

· Most important symptoms and effects, both acute and delayed:

May cause gastro-intestinal irritation if ingested.

- · Danger: No relevant information available.
- · Indication of any immediate medical attention and special treatment needed:

No relevant information available.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · For safety reasons unsuitable extinguishing agents: No relevant information available.
- Special hazards arising from the substance or mixture

May form combustible dust concentrations in air.

Formation of toxic gases is possible during heating or in case of fire.

- Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

- · Environmental precautions No special measures required.
- · Methods and material for containment and cleaning up

Pick up mechanically.

Dispose of the collected material according to regulations.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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7 Handling and storage

- Handling
- · Precautions for safe handling: No special measures required.
- · Information about protection against explosions and fires:

May form combustible dust concentrations in air.

- Conditions for safe storage, including any incompatibilities
- · Requirements to be met by storerooms and receptacles: Avoid storage near extreme heat.
- · Information about storage in one common storage facility:

Store away from oxidizing agents.

Store away from reducing agents.

Further information about storage conditions:

Store in dry conditions.

Keep containers tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- Exposure controls
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

- Engineering controls: No relevant information available.
- · Breathing equipment: Not required under normal conditions of use.
- · Protection of hands: Not required.
- · Material of gloves

Nitrile rubber, NBR

Neoprene gloves

Natural rubber, NR

Sensibilization by the components in the glove materials is possible.

· Eve protection:



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- · Body protection: Not required under normal conditions of use.
- Limitation and supervision of exposure into the environment No special requirements.
- · Risk management measures No special requirements.

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9 Physical and chemical properties		
· Information on basic physical and chemical properties · Appearance:		
Form:	Crystalline powder	
Color:	According to product specification	
Odor:	Characteristic	
· Odor threshold:	Not determined.	
· pH-value:	Not determined.	
· Melting point/Melting range:	Not determined.	
· Boiling point/Boiling range:	Not determined.	
· Flash point:	The product is not flammable.	
· Flammability (solid, gaseous):	Not applicable.	
· Auto-ignition temperature:	Not determined.	
· Decomposition temperature:	Not determined.	
· Danger of explosion:	Product does not present an explosion hazard.	
· Explosion limits		
Lower:	Not determined.	
Upper:	Not determined.	
Oxidizing properties:	Non-oxidizing.	
· Vapor pressure:	Not determined.	
· Density at 20 °C (68 °F):	1.54 g/cm³ (12.85 lbs/gal)	
· Relative density:	Not determined.	
· Vapor density:	Not determined.	
· Evaporation rate:	Not determined.	
· Solubility in / Miscibility with		
Water:	Soluble.	
· Partition coefficient (n-octanol/water): Not determined.		
· Viscosity		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
· Other information	No relevant information available.	

10 Stability and reactivity

- · **Reactivity:** No relevant information available.
- Chemical stability: Stable under normal temperatures and pressures.
- Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Possibility of hazardous reactions

May form combustible dust concentrations in air.

Reacts with reducing agents.

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Reacts with oxidizing agents.

Toxic fumes may be released if heated above the decomposition point.

- · Conditions to avoid No relevant information available.
- Incompatible materials

Oxidizing agents.

Reducing agents.

· Hazardous decomposition products

Under fire conditions only:

Carbon monoxide and carbon dioxide

Nitrogen oxides

11 Toxicological information

- Information on toxicological effects
- · Acute toxicity: Based on available data, the classification criteria are not met.
- · LD/LC50 values that are relevant for classification: None.
- · Primary irritant effect:
- On the skin: Based on available data, the classification criteria are not met.
- · On the eye: Based on available data, the classification criteria are not met.
- · Sensitization: Based on available data, the classification criteria are not met.
- · IARC (International Agency for Research on Cancer):

Substance is not listed.

· NTP (National Toxicology Program):

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration):

Substance is not listed.

· Probable route(s) of exposure:

Ingestion.

Inhalation.

Eye contact.

Skin contact.

- · Acute effects (acute toxicity, irritation and corrosivity): No relevant information available.
- Repeated dose toxicity: No relevant information available.
- · Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- · Carcinogenicity: Based on available data, the classification criteria are not met.
- · Reproductive toxicity: Based on available data, the classification criteria are not met.
- · STOT-single exposure: Based on available data, the classification criteria are not met.
- · STOT-repeated exposure: Based on available data, the classification criteria are not met.
- · Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

- · Toxicity
- · Aquatic toxicity No relevant information available.
- · Persistence and degradability No relevant information available.
- · Bioaccumulative potential: No relevant information available.

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- · **Mobility in soil:** No relevant information available.
- Additional ecological information
- · General notes:

Negative ecological effects are, according to the current state of knowledge, not expected.

· Other adverse effects No relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Smaller quantities can be disposed of with household waste.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- Uncleaned packagings
- · **Recommendation:** Disposal must be made according to official regulations.

14 Transport information	
· UN-Number · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· UN proper shipping name · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· Transport hazard class(es)	
· DOT, ADR/RID/ADN, IMDG, IATA · Class	Not regulated.
· Packing group · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· Environmental hazards	Not applicable.
· Special precautions for user	Not applicable.
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- ·SARA
- · Section 302 (extremely hazardous substances):

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Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act)

All ingredients are listed or exempt.

- · Proposition 65 (California)
- · Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause developmental toxicity for females:

Substance is not listed.

· Chemicals known to cause developmental toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

EPA (Environmental Protection Agency):

Substance is not listed.

IARC (International Agency for Research on Cancer):

Substance is not listed.

· Canadian Domestic Substances List (DSL):

Substance is not listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

· Sources

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene. 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

ChemTel

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1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtel.com