Material Safety Data Sheet

L GLUTAMIC ACID (RXSOL-60-6604-824)

1. Product and Company Identifaction

Product Name	L-GLUTAMIC ACID
Product Number	G8415

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Stock Point : **UAE,OMAN,CANADA,INDIA,KENYA.**

Phone	+91 22 27815541 / 42
Fax	+91 22 2781 1318 :::AOH :0091 9821214367
Email	mail@rxmarine.com

2. Composition / informationon ingredients

Formula	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.

3. Hazards Identification

Classification of the substance or mixture	Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Label elements	Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
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.

4. First Aid Measures

If inhaled	After inhalation: fresh air.
Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Eye Contact	After eye contact: rinse out with plenty of water. Remove contact lenses.
Swallowing	After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Ingestion:	Do not induce vomiting. Obtain medical attention.If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11
ndication of any immediate medical attention and special treatment needed	No data available.

5. Fire-fighting Measures

Suitable extinguishing media	Water Foam Carbon dioxide (CO2) Dry powder.
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture	Carbon oxides Sodium oxides Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus.
Further information	Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system
Personal precautions, protectiveequipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.For personal protection see section 8.

6. Accidental Release Measures

Personal precautions,protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.For personal protection see section 8.
Environmental precautions	Do not let product enter drains.
Methods and materials for containment and cleaning up	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.
Reference to other sections	For disposal see section 13.

7. Handling and Storage

Precautions for safe handling	For precautions see section 3.
Conditions for safe storage,including any incompatibilities	Storage conditions Tightly closed. Dry. Storage class Storage class (TRGS 510): 11: Combustible Solids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Explosive properties	No data available
Oxidizing properties	No data available

8. Exposure controls and personal protection

Control parameters	Ingredients with workplace control parameters

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). Safety glasses Skin protection This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L Respiratory protection required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P1 The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure Do not let product enter drains.

9. Physical and chemical properties

Appearance	Powder.
Odour	No data available.
Odor Threshold	No data available.
pH	No data available.
Melting point/freezing point	Melting point/range: 205 °C.
Initial boiling point and boiling range	OECD Test Guideline 103decomposition below boiling point.
Flammability (solid, gas)	No data available.
Upper/lower flammability or explosive limits	No data available.
Vapor pressure	0,1 hPa at 20 °C - OECD Test Guideline 104.
Vapor density	No data available.
Density	1,54 g/cm3 at 20 °C.
Relative density	No data available.
Water solubility	8,64 g/l at 25 °C - soluble.
Partition coefficient: n-octanol/water	log Pow: -4 at 20 °C - OECD Test Guideline 107 - Bioaccumulation is not expected.
Autoignition temperature	does not ignite.
Decomposition temperature	No data available.
Viscosity Viscosity, kinematic	No data available.
Viscosity, dynamic	No data available.
Explosive properties	No data available.
Oxidizing properties	None.
Other safety information	None.

Dissociation constant	Dissociation constant ca.9,36 at 20 °C- OECD Test Guideline 112.
Other safety information	Surface tension: 74,2 mN/m at 1g/l at 20 °C - OECD Test Guideline 115.

10. Stability and reactivity

Reactivity	The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	Violent reactions possible with: Strong oxidizing agents.
Conditions to avoid	No data available.
Incompatible materials	No data available.
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - male and female - > 5.110 mg/kg Remarks: (ECHA) Symptoms: Possible damages:, Nausea Inhalation: No data available Sigma- G8415 Page 6 of 9 The life science business of Merck operates as MilliporeSigma in the US and Canada LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)
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 sensitization	Maximization Test - Guinea pig Result: negative (Regulation (EC) No. 440/2008, Annex, B.6).
Germ cell mutagenicity	Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Oral Method: OECD Test Guideline 474 Result: negative.
Carcinogenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	No data available.
Specific target organ toxicity - repeated exposure	No data available.
Aspiration hazard	No data available.

Endocrine disrupting properties Product: Assessment	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. 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.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.

12. Ecological information

Toxicity to fish	tatic test LC50 - Cyprinus carpio (Carp) - > 100 mg/l - 96 h (OECD Test Guideline 203).
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202).
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 31 mg/l - 72 h (OECD Test Guideline 201).
Biodegradability aerobic	Exposure time 28 d Result: 97 % - Readily biodegradable. (OECD Test Guideline 301E).
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
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.
Endocrine disrupting properties Product: Assessment	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.
Other adverse effects	No data available.

13. Disposal considerations

Waste treatment Method	Product See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. Transport information

ADR/RID	ADR/RID	IMDG	IATA
UN number	-	-	-
UN proper shipping name	Not dangerous goods.	Not dangerous goods.	Not dangerous goods.
Transport hazard class(es)	-	-	-
Packaging group	-	-	-
Environmental hazards	No	No	No

15. Regulatory information

Safety Health and Environmenta lregulations / legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out.

16. Other information

Other Information	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and weassume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if **Rx Marine International** has been advised of the possibility of such damages.