



Registered Off. : 101-A, Deep Enclave, Pocket 'D', Ashok Vihar, Phase-III, Delhi-110 052 (India)  
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)  
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)  
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## L - GLUTAMINE

### 1. Product Identification

Synonyms : Glutamine, L-; 2-Aminoglutaramic acid; L-2-Aminoglutaramidic acid; Glutamic acid amide; Glutamic acid 5-amide

CAS No. : 56-85-9

Molecular Weight: 146.15

Chemical Formula:  $C_5H_{10}N_2O_3$

Product Code: 36060

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
L - Glutamine	56-85-9	100%

### 3. Hazards Identification

Potential health effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic: Laboratory experiments have resulted in mutagenic effects.

### 4. First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

### 5. Fire Fighting Measures

Fire: Not considered a fire hazard

Explosion: Not considered an explosion hazard.

Fire Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.



## 6. Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

## 7. Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## 8. Exposure Controls/Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. Local exhaust may be necessary to control concentrations to acceptable levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
L-Glutamine	none listed	none listed	none listed

OSHA Vacated PELs: L-Glutamine: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## 9. Physical and Chemical Properties

Physical State: Powder

Appearance: white

Odor: practically odorless

pH: 4-6 (2.5% aq. solution)

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Negligible.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 185 deg C

Decomposition Temperature: 185-186 deg C

Solubility: Moderately soluble in water.

Specific Gravity/Density: Not available.

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#### 10. Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, dust generation, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, ammonia.

Hazardous Polymerization: Has not been reported.

#### 11. Toxicological Information

LD50/LC50:

CAS# 56-85-9:

Oral, mouse: LD50 = 21700 mg/kg;

Oral, rat: LD50 = 7500 mg/kg;

Carcinogenicity:

CAS# 56-85-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

#### 12. Ecological Information

No information available.

#### 13. Disposal Considerations

Dispose of container and unused contents in accordance with federal, state and local requirements.

#### 14. Transport Information

Not Regulated.

#### 15. Regulatory Information

Safety, health and environmental : Ensure all national/local regulations are observed.  
regulations/legislation specific for the substance or mixture

REACH Restrictions : The components of this product are not subject to restrictions.

REACH Authorisation : The components of this product are not subject to authorization.

Chemical Safety Assessment : It has not been carried out.

#### 16. Other Information

Product Use:

Laboratory Reagent.