



MATERIAL SAFETY DATA SHEET

Revision Number A95016D
3/30/09

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY / UNDERTAKING

Product name YSI 2736 Glutamine Standard (5.00 mmol/L)
Synonyms None
Chemical characterization Dilute water solution of the listed ingredients
Manufacturer, importer, supplier YSI, Inc
1700/1725 Brannum Lane
Yellow Springs, OH 45387
EMERGENCY TELEPHONE NUMBER 1- 937- 767- 7241

2. COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% Weight	ACGIH TWA	IARC*	NTP*	OSHA*
7732-18-5	Water	>95	None	N/A	N/A	N/A
56-85-9	L-Glutamine	<1		N/A	N/A	N/A
532-32-1	Sodium benzoate	<1		N/A	N/A	N/A
66992-27-6	BES, sodium salt	<1		N/A	N/A	N/A
10191-18-1	BES, free acid	<1		N/A	N/A	N/A
25102-12—9	EDTA	<1		N/A	N/A	N/A

* IARC - Group 1 (Carcinogenic to humans)

* NTP - Report on Carcinogens - Known Carcinogens

* OSHA - Regulated Carcinogens

3. HAZARDS IDENTIFICATION

Emergency Overview

This product contains no substances which at their given concentration, are considered to be hazardous to health.

Eye Contact	<ul style="list-style-type: none">Can cause severe irritation
Skin Contact	<ul style="list-style-type: none">Exposure can cause skin irritation
Inhalation	<ul style="list-style-type: none">Possible irritation of nasal passages from breathing mist from this product
Ingestion	<ul style="list-style-type: none">No effects expected from normal use and minor amounts ingested. Ingestion of large amounts, a cup full or more, can cause digestive system upset.
General Advice	<ul style="list-style-type: none">As with any chemical, use caution when handlingIf exposure effects persist seek medical attention
Principle Routes of Exposure	<ul style="list-style-type: none">Eyes, absorption, ingestion

4. FIRST AID MEASURES

General Advice	<ul style="list-style-type: none">If exposure symptoms persist, seek medical attention.
Skin Contact	<ul style="list-style-type: none">Wash exposed areas with soap and water for 15 minutes
Eye Contact	<ul style="list-style-type: none">Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes
Inhalation	<ul style="list-style-type: none">Move to fresh air in case of accidental inhalation
Ingestion	<ul style="list-style-type: none">For ingestion of large amounts induce vomiting if person is conscious. If conditions persist, seek medical attention.
Notes to Physician	<ul style="list-style-type: none">Treat symptomatically
Protection of First-Aiders	<ul style="list-style-type: none">Use necessary personal protective equipment
Aggravated Medical Conditions	<ul style="list-style-type: none">Users with skin conditions (eczema, psoriasis, etc), respiratory conditions

	(asthma, bronchitis, emphysema, etc), or with chemical sensitivities should take protective precautions
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5. FIRE-FIGHTING MEASURES

Flash Point	<ul style="list-style-type: none"> None
Suitable Extinguishing Media	<ul style="list-style-type: none"> Not applicable to this product
Extinguishing media which must not be used for safety reasons	<ul style="list-style-type: none"> None

Specific Hazards

Special exposure hazards rising from the substance or preparation itself, its combustion products, or released gases	<ul style="list-style-type: none"> None
Special protective equipment for firefighters	<ul style="list-style-type: none"> None As in any fire, wear self-contained breathing apparatus, and full protective gear

Specific Methods

NFPA (National Fire Protection Association)	Health=1 (slight)	Reactivity=0	Fire=0	Special=0 (none)
HMIS (Hazardous Material Information System)	Health=1 (slight)	Reactivity=0	Fire=0	Special=0 (none)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	<ul style="list-style-type: none"> Ensure adequate ventilation Use necessary personal protective equipment
Environmental precautions	<ul style="list-style-type: none"> No information available
Methods for cleaning up	<ul style="list-style-type: none"> Soak up with inert absorbent After cleaning, flush away traces with water

7. HANDLING AND STORAGE

Technical Measures / Precautions	<ul style="list-style-type: none"> Avoid contact with skin, eyes, and clothing
Safe Handling Advice	<ul style="list-style-type: none"> Wash hands immediately after contact to avoid hand-eye transfer Wear personal protective equipment

Storage

Technical Measures / Precautions	<ul style="list-style-type: none"> Store in properly labeled containers Keep containers tightly closed. Discard any material that may be contaminated or, which may have changed composition.
Incompatible Products	<ul style="list-style-type: none"> No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures	<ul style="list-style-type: none"> Ensure adequate ventilation, especially in confined areas Ensure eyewash station is readily available
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Personal protective equipment

Hand Protection	<ul style="list-style-type: none"> Wear the appropriate protective gloves
Eye protection	<ul style="list-style-type: none"> Wear tightly fitting safety goggles or safety glasses with side-shields Face-shield
Respiratory Protection	<ul style="list-style-type: none"> Ensure adequate ventilation is available before handling any chemical In case of insufficient ventilation, wear suitable respiratory equipment
Skin and Body Protection	<ul style="list-style-type: none"> Long sleeved clothing Boots

	<ul style="list-style-type: none"> • apron
Hygiene measures	<ul style="list-style-type: none"> • Handle in accordance with good industrial hygiene and safety practice • Keep away from food, drink, and animal feeding stuffs
Environmental exposure controls	<ul style="list-style-type: none"> • No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Form	Liquid
Appearance	Clear colorless liquid
Odor	None

Important Health Safety and Environmental Information

pH	6.5 to 7.5
Boiling Point / Range	100 °C
Flash Point	None
Vapor Pressure	Equivalent to water
Vapor Density	= water vapor
Water Solubility	Infinitely soluble
Specific Gravity	1.00

10. STABILITY AND REACTIVITY

Stability	<ul style="list-style-type: none"> • Stable under normal conditions
Materials to Avoid	<ul style="list-style-type: none"> • None
Hazardous Decomposition Products	<ul style="list-style-type: none"> • None
Polymerization	<ul style="list-style-type: none"> • Polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Local Effects

Skin Irritation	<ul style="list-style-type: none"> • May cause skin irritation
Eye Irritation	<ul style="list-style-type: none"> • Can cause severe irritation
Inhalation	<ul style="list-style-type: none"> • May cause irritation in nasal passages
Ingestion	<ul style="list-style-type: none"> • No effects expected from normal use. Ingestion of this product may cause digestive system upset
Sensitization	<ul style="list-style-type: none"> • No information available
Chronic Toxicity	<ul style="list-style-type: none"> • No information available

Specific Effects

Carcinogenic Effects	<ul style="list-style-type: none"> • No information available
Mutagenic Effects	<ul style="list-style-type: none"> • No information available
Reproductive Toxicity	<ul style="list-style-type: none"> • No information available
Target Organ Effects	<ul style="list-style-type: none"> • No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Product Information

Aquatic Toxicity	<ul style="list-style-type: none"> • No information available.
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Other Information

Ozone Depletion Potential; ODP; (R-11=1)	<ul style="list-style-type: none"> • No information available.
Global Warming Potential (GWP)	<ul style="list-style-type: none"> • No information available.

Additional Ecological Information	<ul style="list-style-type: none"> No information available
Mobility	<ul style="list-style-type: none"> No information available.
Bioaccumulative Potential	<ul style="list-style-type: none"> No information available.
Ecotoxicity Effects	<ul style="list-style-type: none"> No information available
Aquatic Toxicity	<ul style="list-style-type: none"> No information available.

13. DISPOSAL CONSIDERATIONS

Waste From Residues / Unused Products	<ul style="list-style-type: none"> Dispose of in accordance with local regulations
Contaminated Packaging	<ul style="list-style-type: none"> Empty containers should be rinsed and disposed of as appropriate for glass and plastic containers

14. TRANSPORT INFORMATION

DOT Not regulated
UN-No
Proper shipping name
Packing group
Subsidiary Risk
Description

15. REGULATORY INFORMATION

U.S. Inventories

CAS	Chemical Name	% Weight	ACGIH TWA
7732-18-5	Water	>95	None
56-85-9	L-Glutamine	<1	N/A
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10191-18-1	BES, free acid	<1	N/A
25102-12—9	EDTA	<1	N/A

* ACGIH - Occupational Exposure Limits - TWA's

International Inventories

CAS	Chemical Name	% Weight	EUOED - EU
7732-18-5	Water	>95	None
56-85-9	L-Glutamine	<1	N/A
532-32-1	Sodium benzoate	<1	N/A
66992-27-6	BES, sodium salt	<1	N/A
10191-18-1	BES, free acid	<1	N/A
25102-12—9	EDTA	<1	N/A

* EUOED - EU Occupational Exposure Directive (98/24/EC) Indicative Occupational Exposure Limit Values (IOELV)

16. OTHER INFORMATION

Literary Reference None.
Prepared By YSI, Inc.
 End of Safety Data Sheet.