



MATERIAL SAFETY DATA SHEET

Revision Number A95023D
3/30/09

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

Product name YSI 2773 Choline Standard (450 mg/L)
Synonyms None
Chemical characterization Dilute aqueous solution of the listed ingredients.
Manufacturer, importer, supplier YSI, Inc.
1700/1725 Brannum Lane
Yellow Springs, OH 45387
USA
EMERGENCY TELEPHONE NUMBER 1-937-767-7241

2. COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% Weight	ACGIH TWA	Acute Toxicity	IARC*	NTP*	OSHA*
7732-18-5	Water	>97	None	N/A	N/A	N/A	N/A
87-67-2	Choline bitartrate	<1			N/A	N/A	N/A
532-32-1	Sodium benzoate	<1			N/A	N/A	N/A
25102-12-9	Potassium 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	May cause irritation with repeated exposure.
Skin Contact	May cause irritation with repeated exposure.
Inhalation	Possible mild irritation from vapors if inhaled.
Ingestion	Ingestion of large amounts can cause digestive upset.
General Advice	As with any chemical, use caution when handling.
Principle Routes of Exposure	Eyes, absorption, ingestion

4. FIRST AID MEASURES

General Advice	If exposure symptoms persist, seek medical attention.
Skin Contact	Wash exposed areas with soap and water for 15 minutes.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Inhalation	Move to fresh air
Ingestion	For ingestion of large amounts induce vomiting if person is conscious.
Notes to Physician	Treat symptomatically
Protection of First-Aiders	Use necessary personal protective equipment.
Aggravated Medical Conditions	Users with skin conditions (eczema, psoriasis, etc.), respiratory conditions (asthma, bronchitis, emphysema, etc), or with chemical sensitivities should take protective precautions.

5. FIRE-FIGHTING MEASURES

Flash Point	None
Suitable Extinguishing Media	Not applicable to this product
Extinguishing media which must not be used for safety reasons	None

Specific Hazards

Special exposure hazards rising from the substance or preparation itself, its combustion products, or released gases	None
Special protective equipment for firefighters	None

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	Use the appropriate personal protective equipment
Environmental precautions	No information available
Methods for cleaning up	Soak up spill with an inert absorbent material. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling

Technical Measures / Precautions	Avoid contact with skin, eyes, and clothing
Safe Handling Advice	Take necessary personal protective precautions before using this product.

Storage

Technical Measures / Precautions	Keep this product in properly labeled container. Keep containers tightly closed; discard any material that may be contaminated.
Incompatible Products	No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures	Ensure adequate ventilation before use, especially in confined areas. Ensure eyewash station is readily available.
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Personal protective equipment

Hand Protection	Wear appropriate protective gloves
Eye protection	Wear tightly fitting safety goggles or safety glasses with side-shields
Respiratory Protection	Ensure adequate ventilation is available before handling any chemical. In case of insufficient ventilation, wear suitable respiratory equipment.
Skin and Body Protection	Wear lightweight protective clothing Boots Apron
Hygiene measures	Handle in accordance with good industrial hygiene and safety practices. Keep away from food, drink, and animal feeding stuffs.
Environmental exposure controls	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	Approx. the same as water
Vapor Density	Equal to water vapor
Water Solubility	Ininitely soluble
Specific Gravity	1.0

10. STABILITY AND REACTIVITY

Stability	Stable
Materials to Avoid	No information available
Hazardous Decomposition Products	None under normal use
Polymerization	Polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Local Effects

Skin Irritation	May cause skin irritation in susceptible persons.
Eye Irritation	May cause eye irritation.
Inhalation	Inhalation may cause mild irritation of respiratory tract.
Ingestion	Ingestion of large amounts may cause digestive system upset.
Chronic Toxicity	No information available.

Specific Effects

Carcinogenic Effects	No information available.
Mutagenic Effects	No information available.
Reproductive Toxicity	No information available.
Target Organ Effects	No information available.

12. ECOLOGICAL INFORMATION

Product Information

Aquatic Toxicity	No information available.
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Other Information

Ozone Depletion Potential; ODP; (R-11=1)	No information available.
Global Warming Potential (GWP)	No information available.
Additional Ecological Information	No information available
Mobility	No information available.
Bioaccumulative Potential	No information available.
Ecotoxicity Effects	No information available
Aquatic Toxicity	No information available.

13. DISPOSAL CONSIDERATIONS

Waste From Residues / Unused Products	Dispose of in accordance with local and national regulations.
Contaminated Packaging	Empty containers should be rinsed and disposed of as appropriate for glass and plastic containers.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

U.S. Inventories

CAS	Chemical Name	% Weight	ACGIH*
7732-18-5	Water	>97	None
87-67-2	Choline bitartrate	<1	
532-32-1	Sodium benzoate	<1	
25102-12-9	Potassium EDTA	<1	

* ACGIH - Occupational Exposure Limits - TWA's

International Inventories

CAS	Chemical Name	% Weight	EUOED*
7732-18-5	Water	>97	None
87-67-2	Choline bitartrate	<1	
532-32-1	Sodium benzoate	<1	
25102-12-9	Potassium EDTA	<1	

* 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.