



SAFETY DATA SHEET

1. Identification

Product identifier YSI 2357 Buffer Concentrate Kit

Other means of identification

Product code 2357

Recommended use Analysis Standard/Reagent

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name YSI, Inc

Address 1700/1725 Brannum Lane

Telephone (937) 767-7241

E-mail MSDSinfo@ysi.com

Emergency phone number CHEMTREC (US/Canada) (800) 424-9300
CHEMTREC (International) 011 703-527-3887
(Collect calls accepted)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Serious eye damage/eye irritation Category 2A
Reproductive toxicity Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Causes serious eye irritation. Suspected of damaging fertility or the unborn child.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Sodium phosphate dibasic	7558-79-4	50 - 55
Sodium chloride	7647-14-5	16 - 22

Sodium acid phosphate	7558-80-7	10 - 15
Glycine, N,N'-1,2-ethanediylbis(N-carboxymethyl) dipotassium salt, dihydrate	25102-12-9	< 10
Sodium Benzoate	532-32-1	< 10
Gentamicin, sulfate (salt)	1405-41-0	< 1

4. First-aid measures

Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth. Do not induce vomiting without advice from poison control center. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Symptoms include itching, burning, redness, and tearing of eyes.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid contact during pregnancy/while nursing. Provide adequate ventilation. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in a cool, dry, well-ventilated place. Keep container tightly closed. Store away from incompatible materials (See Section 10).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	For prolonged or repeated skin contact use suitable protective gloves.
Other	Wear suitable protective clothing.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Powder.
Color	White
Odor	Mild odor.
Odor threshold	No data available.
pH	6.5 - 7.5
Melting point/freezing point	> 500 °F (> 260 °C)
Initial boiling point and boiling range	No data available.
Flash point	Not applicable.
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	No data available.
Flammability limit - upper (%)	No data available.
Explosive limit - lower (%)	No data available.
Explosive limit - upper (%)	No data available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	> 1
Solubility(ies)	
Solubility (water)	Soluble.
Partition coefficient (n-octanol/water)	Not determined.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	Not applicable.
Other information	
Density	No data available.

Explosive properties	No data available.
Oxidizing properties	No data available.
VOC (Weight %)	Not applicable.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	None known.
Incompatible materials	Strong acids. Strong oxidizing agents.
Hazardous decomposition products	Phosphorus oxides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Do not ingest.
Inhalation	Do not inhale this material.
Skin contact	Avoid contact with skin.
Eye contact	Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Symptoms include itching, burning, redness, and tearing of eyes. May cause adverse reproductive effects - such as birth defects, miscarriages, or infertility based on animal data.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Sodium acid phosphate (CAS 7558-80-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 7940 mg/kg
<i>Oral</i>		
LD50	Mouse	> 2000 mg/kg
	Rat	8290 mg/kg
Sodium chloride (CAS 7647-14-5)		
Acute		
<i>Oral</i>		
LD50	Rat	3000 mg/kg
Sodium phosphate dibasic (CAS 7558-79-4)		
Acute		
<i>Oral</i>		
LD50	Rat	17 g/kg

Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization	No data available.
Skin sensitization	Not a skin sensitizer.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	No data available.

12. Ecological information

Ecotoxicity Not expected to be harmful to aquatic organisms.

Components	Species	Test Results
Sodium acid phosphate (CAS 7558-80-7)		
Aquatic		
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) 186 mg/l, 96 hours
Sodium Benzoate (CAS 532-32-1)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 100 mg/l, 96 hours
Sodium chloride (CAS 7647-14-5)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 340.7 - 469.2 mg/l, 48 hours
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>) 1294.6 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	No data available for this product.	
Mobility in soil	Not available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

13. Disposal considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. One or more components are not listed on TSCA.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4)	
Sodium phosphate dibasic (CAS 7558-79-4)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. Massachusetts RTK - Substance List**

Sodium phosphate dibasic (CAS 7558-79-4)

US. New Jersey Worker and Community Right-to-Know Act

Sodium phosphate dibasic (CAS 7558-79-4)

US. Pennsylvania Worker and Community Right-to-Know Law

Sodium phosphate dibasic (CAS 7558-79-4)

US. Rhode Island RTK

Sodium phosphate dibasic (CAS 7558-79-4)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

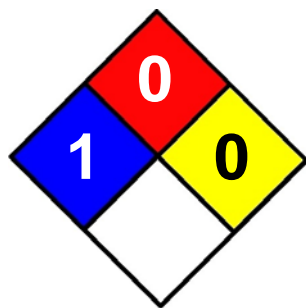
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Version # 01

HMIS® ratings

Health: 1
Flammability: 0
Physical hazard: 0

NFPA Ratings**Disclaimer**

The information in the sheet was written based on the best knowledge and experience currently available.