



a xylem brand

# SAFETY DATA SHEET

## 1. Product and company identification

**Material name** YSI 1579 Carbonate Buffer Concentrate  
**Version No.** 01  
**Issue date** 05-December-2013  
**Revision date** -  
**Supersedes date** -  
**CAS No.** Mixture  
**Manufacturer information** YSI, Inc  
 1700/1725 Brannum Lane  
 Yellow Springs, Ohio 45387  
 MSDSinfo@ysi.com  
 (937) 767-7241  
 CHEMTREC (US/Canada) (800) 424-9300  
 CHEMTREC (International) 011 703-527-3887  
 (Collect calls accepted)

## 2. Hazards Identification

**Emergency overview** WARNING  
 Causes eye irritation. Prolonged exposure may cause chronic effects. May cause reproductive effects.

**Potential health effects**

**Routes of exposure** Inhalation. Ingestion. Skin contact. Eye contact.

**Skin** Do not get this material in contact with skin.

**Inhalation** Do not breathe dust/fume/gas/mist/vapors/spray.

**Ingestion** Do not ingest.

**Chronic effects** Contains a substance which may have a reproductive effect.

**Signs and Symptoms** Symptoms include itching, burning, redness, and tearing of eyes.

## 3. Composition/Information on Ingredients

Components	CAS No.	Percent
Sodium Benzoate	532-32-1	< 8
Sodium carbonate	497-19-8	< 7
Sodium bicarbonate	144-55-8	< 7
Glycine, N,N'-1,2-ethanediybis(N-carboxymethyl) dipotassium salt, dihydrate	25102-12-9	< 5
Polyethyleneimine	9002-98-6	< 5
Sodium chloride	7647-14-5	< 3
Gentamicin, sulfate (salt)	1405-41-0	< 1
Water	7732-18-5	> 64

## 4. First aid measures

**First aid procedures**

**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.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Inhalation** Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.

<b>Ingestion</b>	Rinse mouth. Do not induce vomiting without advice from poison control centre. Get medical attention if symptoms occur.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically.
<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire Fighting Measures

### Extinguishing media

**Suitable extinguishing media** Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

### Protection of firefighters

**Specific hazards arising from the chemical** During fire, gases hazardous to health may be formed.

**Protective equipment 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.

### Explosion data

**Sensitivity to static discharge** Not established.

**Sensitivity to mechanical impact** Not established.

## 6. Accidental release measures

### Personal precautions

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 vapours or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.

### Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

### Methods for 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.

## 7. Handling and storage

### Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapour. 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.

### Storage

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).

### 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.

### Personal protective equipment

**Eye / face protection** Wear safety glasses with side shields (or goggles).

**Skin protection** Wear suitable protective clothing. For prolonged or repeated skin contact use suitable protective gloves.

**Respiratory protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**9. Physical & Chemical Properties**

<b>Appearance</b>	Not available.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Clear and colorless.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	6.5 - 7.5
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Boiling point</b>	100 °C (212 °F)
<b>Melting point/freezing point</b>	Not available.
<b>Solubility (water)</b>	Infinitely soluble
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.

**10. Chemical Stability & Reactivity Information**

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	None known.
<b>Incompatible materials</b>	None known.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.
<b>Possibility of hazardous reactions</b>	Polymerization will not occur.

**11. Toxicological information****Toxicological data**

<b>Components</b>	<b>Species</b>	<b>Test results</b>
Sodium bicarbonate (CAS 144-55-8)		
<b>Acute</b>		
<i>ORAL</i>		
LD50	Rat	4220 mg/kg
Sodium carbonate (CAS 497-19-8)		
<b>Acute</b>		
<i>INHALATION</i>		
LC50	Rat	2300 mg/m <sup>3</sup> , 2 Hours
<i>ORAL</i>		
LD50	Rat	4090 mg/kg
Sodium chloride (CAS 7647-14-5)		
<b>Acute</b>		
<i>ORAL</i>		
LD50	Rat	3000 mg/kg
<b>Local effects</b>	Irritating to eyes.	

<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Reproductive effects</b>	Suspected of damaging fertility.
<b>Symptoms and target organs</b>	Symptoms include itching, burning, redness, and tearing of eyes.

## 12. Ecological information

### Ecotoxicological data

Components		Species	Test results
Sodium Benzoate (CAS 532-32-1)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	> 100 mg/l, 96 hours
Sodium bicarbonate (CAS 144-55-8)			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	2350 mg/l, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	8600 mg/l, 96 hours
Sodium carbonate (CAS 497-19-8)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Ceriodaphnia dubia</i> )	156.6 - 298.9 mg/l, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	300 mg/l, 96 hours
Sodium chloride (CAS 7647-14-5)			
<b>Aquatic</b>			
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

<b>Ecotoxicity</b>	Not expected to be harmful to aquatic organisms.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	Not available.

## 13. Disposal considerations

<b>Disposal instructions</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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

### TDG

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

## 15. Regulatory information

<b>Canadian regulations</b>	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
<b>WHMIS status</b>	Controlled
<b>WHMIS Classification</b>	D2A - Other Toxic Effects-VERY TOXIC
<b>WHMIS labeling</b>	



## Inventory status

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)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
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

### HMIS® ratings

Health: 2  
Flammability: 0  
Physical Hazard: 0

### NFPA ratings

Health: 2  
Flammability: 0  
Instability: 0

### Disclaimer

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