



# MATERIAL SAFETY DATA SHEET

Revision Number A08589D  
3/30/12

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

**Product name** YSI 8591 Bicarbonate Buffer  
**Synonyms** None  
**Chemical characterization** Mixture  
**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*
7647-14-5	Sodium chloride	91-92	None	N/A	N/A	N/A
144-55-8	Sodium bicarbonate	8-9		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.

<b>Eye Contact</b>	<ul style="list-style-type: none"><li>May cause severe irritation</li></ul>
<b>Skin Contact</b>	<ul style="list-style-type: none"><li>Exposure may cause skin irritation</li></ul>
<b>Inhalation</b>	<ul style="list-style-type: none"><li>Inhalation of dust may cause mild irritation of respiratory tract</li></ul>
<b>Ingestion</b>	<ul style="list-style-type: none"><li>Ingestion of a large amount may cause digestive system upset.</li></ul>
<b>General Advice</b>	<ul style="list-style-type: none"><li>As with any chemical, use caution when handling</li><li>If exposure effects persist seek medical attention</li></ul>
<b>Principle Routes of Exposure</b>	<ul style="list-style-type: none"><li>Eyes, absorption, ingestion</li></ul>

## 4. FIRST AID MEASURES

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

## 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	<ul style="list-style-type: none"><li>None</li></ul>
<b>Suitable Extinguishing Media</b>	<ul style="list-style-type: none"><li>Not applicable to this product</li></ul>
<b>Extinguishing media which must</b>	<ul style="list-style-type: none"><li>None</li></ul>

not be used for safety reasons	
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### Specific Hazards

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

### 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"> <li>• Ensure adequate ventilation</li> <li>• Use necessary personal protective equipment</li> </ul>
Environmental precautions	<ul style="list-style-type: none"> <li>• No information available</li> </ul>
Methods for cleaning up	<ul style="list-style-type: none"> <li>• In case of spill or leak, flush to sewer or ground with lots of water.</li> </ul>

## 7. HANDLING AND STORAGE

Technical Measures / Precautions	<ul style="list-style-type: none"> <li>• Avoid contact with skin, eyes, and clothing</li> <li>• Take necessary personal protective precautions before using this product.</li> </ul>
Safe Handling Advice	<ul style="list-style-type: none"> <li>• Wash hands immediately after contact to avoid hand-eye transfer</li> </ul>

### Storage

Technical Measures / Precautions	<ul style="list-style-type: none"> <li>• Store in properly labeled containers</li> <li>• Keep containers tightly closed. Discard any material that may be contaminated or, which may have changed composition.</li> </ul>
Incompatible Products	<ul style="list-style-type: none"> <li>• Avoid strong acids, oxidizing agents.</li> </ul>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

Hand Protection	<ul style="list-style-type: none"> <li>• Wear the appropriate protective gloves</li> </ul>
Eye protection	<ul style="list-style-type: none"> <li>• Wear tightly fitting safety goggles or safety glasses with side-shields</li> <li>• Face-shield</li> </ul>
Respiratory Protection	<ul style="list-style-type: none"> <li>• Ensure adequate ventilation is available before handling any chemical</li> <li>• In case of insufficient ventilation, wear suitable respiratory equipment</li> </ul>
Skin and Body Protection	<ul style="list-style-type: none"> <li>• Long sleeved clothing</li> <li>• Boots</li> <li>• apron</li> </ul>
Hygiene measures	<ul style="list-style-type: none"> <li>• Handle in accordance with good industrial hygiene and safety practice</li> <li>• Keep away from food, drink, and animal feeding stuffs</li> </ul>
Environmental exposure controls	<ul style="list-style-type: none"> <li>• No information available</li> </ul>

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### General Information

Form	Solid
Appearance	White powder
Odor	None

### Important Health Safety and Environmental Information

pH	neutral
Boiling Point / Range	No information
Flash Point	None
Water Solubility	Infinitely soluble

## 10. STABILITY AND REACTIVITY

Stability	<ul style="list-style-type: none"><li>Stable under normal conditions</li></ul>
Materials to Avoid	<ul style="list-style-type: none"><li>Strong acids and oxidizing agents</li></ul>
Hazardous Decomposition Products	<ul style="list-style-type: none"><li>None</li></ul>
Polymerization	<ul style="list-style-type: none"><li>Polymerization does not occur</li></ul>

## 11. TOXICOLOGICAL INFORMATION

### Local Effects

Skin Irritation	<ul style="list-style-type: none"><li>May cause skin irritation in susceptible persons.</li></ul>
Eye Irritation	<ul style="list-style-type: none"><li>Dust may cause severe irritation</li></ul>
Inhalation	<ul style="list-style-type: none"><li>May cause irritation in nasal passages</li></ul>
Ingestion	<ul style="list-style-type: none"><li>Ingestion of this product may cause digestive system upset</li></ul>
Sensitization	<ul style="list-style-type: none"><li>No information available</li></ul>
Chronic Toxicity	<ul style="list-style-type: none"><li>No information available</li></ul>

### Specific Effects

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

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity Effects

### Product Information

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

Ozone Depletion Potential; ODP; (R-11=1)	<ul style="list-style-type: none"><li>No information available.</li></ul>
Global Warming Potential (GWP)	<ul style="list-style-type: none"><li>No information available.</li></ul>
Additional Ecological Information	<ul style="list-style-type: none"><li>No information available</li></ul>
Mobility	<ul style="list-style-type: none"><li>No information available.</li></ul>
Bioaccumulative Potential	<ul style="list-style-type: none"><li>No information available.</li></ul>
Ecotoxicity Effects	<ul style="list-style-type: none"><li>No information available</li></ul>
Aquatic Toxicity	<ul style="list-style-type: none"><li>No information available.</li></ul>

### 13. DISPOSAL CONSIDERATIONS

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

### 14. TRANSPORT INFORMATION

DOT Not regulated

### 15. REGULATORY INFORMATION

#### U.S. Inventories

CAS	Chemical Name	% Weight	ACGIH TWA
7647-14-5	Sodium chloride	91-92	None
144-55-8	Sodium bicarbonate	8-9	

\* ACGIH - Occupational Exposure Limits - TWA's

#### International Inventories

CAS	Chemical Name	% Weight	EUOED - EU
7647-14-5	Sodium chloride	91-92	None
144-55-8	Sodium bicarbonate	8-9	

\* 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.