


Version 2.0
Date revised: 5/29/2015

SAFETY DATA SHEET 
Conforms to regulation (EC) no. EU 453/2010

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: SSC Buffer 20X **Product Number:** EC-873

1.2 Relevant Identified Uses of the Substance/Mixture and Uses Advised Against Investigational research by professional users

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer
National Diagnostics
305 Patton Drive
Atlanta, GA 30036
(404) 699-2121
(800) 526-3867
info@nationaldiagnostics.com

1.4 Emergency Telephone Number

Chemtrec

1-800 424-9300 (U.S. & Canada)
01-703-527-3887 (outside U.S. & Canada)

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Not a hazardous substance or mixture according to regulation (EC) No. 1272/2008.

2.2 Label Elements

This product has no labeling elements associated with EC directives or respective national laws.

2.3 Other Hazards

None found.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Chemical Names/Description

Aqueous, buffered solution of sodium chloride and trisodium citrate.

Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
Trisodium Citrate	8.8	68-04-2	200-675-3	N.A.
Sodium Chloride	18	7647-14-5	231-598-3	N.A.

SECTION 4 - FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation

If dust from evaporated solvent is inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion

If large amounts were swallowed, give water to drink and get medical advice.

Skin

Wash exposed area with soap and water. Get medical advice if irritation develops.

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Inhalation

Trisodium Citrate:

Irritation, pain.

Sodium Chloride:

No information found.

Ingestion

Trisodium Citrate:

Vomiting, diarrhea, prostration.

Sodium Chloride:

No information found.

Skin

Trisodium Citrate:

Itching, redness, pain.

Sodium Chloride:

No information found.

Eyes

Trisodium Citrate:

Itching, redness, pain.

Sodium Chloride:

No information found.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Unknown/not applicable

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use media appropriate to the primary cause of fire.

5.2 Special Hazards Arising from the Substance/Mixture

Hazardous Combustion Products

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Decomposition Products

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymeriation

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

5.3 Advice for Firefighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

5.4 Further Information

No data available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Wear appropriate protective equipment as specified in Section 8.

6.2 Environmental Precautions

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Wear appropriate personal protective equipment as specified in section 8. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in a chemical waste container.

6.4 References to Other Sections

For disposal information, see Section 13. For Protective clothing and equipment, see Section 8.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

7.2 Conditions for Safe Storage (including any incompatibles)

Keep in a tightly closed container, stored in a cooled, dry, ventilated area.

Incompatibles

Trisodium Citrate:

Strong oxidizers.

Sodium Chloride:

No incompatibility data found.

7.3 Specific End Uses

Investigational research by professional users

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

8.1 Control Parameters

Component: Trisodium Citrate

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): None established

Component: Sodium Chloride

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): None established

8.2 Exposure Controls

Engineering Controls

Not expected to require any special ventilation.

Respiratory Protection

Not expected to require personal respirator usage.

Eye Protection

Safety glasses.

Skin Protection

Wear protective gloves and clean body covering clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a. Appearance	Clear, colorless solution	b. Odor	None
c. Odor Threshold	N.A.	d. pH	7.0
e. Melting/Freezing Point (°C)	0	f. Boiling point (°C)	104.4
g. Flash Point (°C)	N.A.	h. Evaporation Rate	1.0 (H2O = 1)
i. Flammability	N.A.	j. Upper/Lower Flammability or Explosive Limits	N.A.
k. Vapor Pressure	Water	l. Vapor Density (Air = 1)	Water
m. Relative Density	1.15	n. Water Solubility	Soluble
o. Partition Coefficient n-octanol/water	Mixture	p. Autoignition Temperature (°C)	N.A.
q. Decomposition Temperature (°C)	N.A.	r. Viscosity	No data available.
s. Explosive Properties	N.A.	t. Oxidizing Properties	N.A.

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical Stability

Stable under ordinary conditions of use and storage.

10.3 Possibility of Hazardous Reactions

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

10.4 Conditions to Avoid

Incompatibles.

10.5 Incompatible Materials

Trisodium Citrate:

Strong oxidizers.

Sodium Chloride:

No incompatibility data found.

10.6 Hazardous Decomposition Products

Carbon dioxide and carbon monoxide may form when heated to decomposition.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product LD50 Values

Oral Rat LD50 (mg/kg)

No Data

Dermal Rabbit LD50 (mg/kg)

No Data

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Trisodium Citrate	No	No	None
Sodium Chloride	No	No	None

Potential Health Effects

Inhalation

Trisodium Citrate

Inhalation of large amounts of dust left after solvent evaporation may cause irritation to the respiratory tract.

Sodium Chloride

May cause respiratory tract irritation.

Ingestion

Trisodium Citrate

Very large doses can cause vomiting, diarrhea, and prostration. Dehydration and congestion occur in most organs. Hypertonic solutions can produce violent inflammatory reactions in the gastrointestinal tract.

Sodium Chloride

Ingestion of large amounts may cause gastrointestinal irritation. Ingestion of large amounts may cause nausea and vomiting, rigidity or convulsions. Continued exposure can produce a coma, dehydration and internal organ congestion.

Skin

Trisodium Citrate

Possible irritation on prolonged contact with moist or sensitive areas of the skin.

Sodium Chloride

May cause skin irritation.

Eyes

Trisodium Citrate

Causes irritation, redness, and pain.

Sodium Chloride

May cause eye irritation.

Carcinogenicity

Trisodium Citrate

Not listed as a known or anticipated carcinogen by NTP or IARC.

Sodium Chloride

Not listed by ACGIH, IARC, NIOSH, NTP or OSHA.

Mutagenicity

Trisodium Citrate

No information found.

Sodium Chloride

See actual entry in RTECS for complete information.

Reproductive Toxicity

Trisodium Citrate

No information found.

Sodium Chloride

No data available.

Teratogenic Effects

Trisodium Citrate

No information found.

Sodium Chloride

No information found.

Routes of Entry

Trisodium Citrate

No information found.

Sodium Chloride

No information found.

Target Organ Statement

Trisodium Citrate

No information found.

Sodium Chloride

No information found.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

COMPONENT: Trisodium Citrate

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	LC50(48hr, golden orfe) 440- 760 mg/L	No data	No data	TT>10g/l

	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	NOEC (gallus domesticus, 4 day) >4g/kg	No data	No data	No data

COMPONENT: Sodium Chloride

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	LC50 (96hrs, bluegill) 5480 mg/L	LC50 (48 hr, daphnia) 874mg/L	LC50 (120hrs) 2430 mg/L	No data

	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	LD50 (house sparrow) 3500mg/kg	No data	IC50 (7 days) 500-1950mg/kg soil	No data

12.2 Persistence and Degradability

Trisodium Citrate

Readily biodegradable, 97% elimination in 28 days

Sodium Chloride

No data

12.3 Bioaccumulative Potential

Trisodium Citrate

Calculated BCF 0.5

Sodium Chloride

No data

12.4 Mobility in Soil

Trisodium Citrate

No data

Sodium Chloride

No data

12.5 Results of PBT and vPvB Assessment

Trisodium Citrate

Not PBT or vPvB

Sodium Chloride

Not PBT or vPvB

12.6 Other Adverse Effects

Trisodium Citrate

None

Sodium Chloride

None

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Offer surplus or non-recyclable product to licensed disposal company. Disposal is subject to user compliance with applicable law and product characteristics at time of disposal. Dispose of packaging as product.

SECTION 14 - TRANSPORT INFORMATION

	ADR/RID	IATA	IMO	DOT
14.1 UN Number	N.A.	N.A.	N.A.	N.A.
14.2 Shipping Name	Not regulated	Not regulated	Not regulated	Not regulated
14.3 Hazard Class	N.A.	N.A.	N.A.	N.A.
14.4 Packing Group	N.A.	N.A.	N.A.	N.A.
14.5 Environmental Hazards	N.A.	N.A.	N.A.	N.A.
14.6 Special Precautions	N.A.	N.A.	N.A.	N.A.

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance/Mixture

United States

TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
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Trisodium Citrate	No	No	No	No	No
Sodium Chloride	No	No	No	Yes	No

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

SECTION 16 - OTHER INFORMATION

Revisional Updates

5/29/2015 - Updated Sections 2.1 and 3.2

4/16/2013 - Released Version 1.0

NFPA Codes

Health 1 Flammability 0 Reactivity 0

Dangers

Trisodium Citrate

None

Sodium Chloride

None

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