

## SAFETY DATA SHEET

Creation Date 04-May-2011

Revision Date 25-Apr-2019

Revision Number 4

### 1. Identification

**Product Name** Tris EDTA 100X Solution

**Cat No. :** BP1338-1; BP1338-4; BP1338-20

**Synonyms** Tris(hydroxymethyl)aminomethane-EDTA solution.

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**  
Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Emergency Telephone Number**  
CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

**Classification**  
Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Label Elements**  
None required

**Hazards not otherwise classified (HNOC)**  
None identified

### 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Water	7732-18-5	85

Tris (hydroxymethyl) aminomethane	77-86-1	12.1
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	2.9
Hydrochloric acid	7647-01-0	<1%

#### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
<b>Inhalation</b>	Remove to fresh air. Get medical attention if symptoms occur. If not breathing, give artificial respiration.
<b>Ingestion</b>	Do NOT induce vomiting. Get medical attention.
<b>Most important symptoms and effects</b>	No information available.
<b>Notes to Physician</b>	Treat symptomatically

#### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

#### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

Nitrogen oxides (NOx). Ammonia.

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### NFPA

**Health**  
1

**Flammability**  
0

**Instability**  
0

**Physical hazards**  
N/A

#### 6. Accidental release measures

<b>Personal Precautions</b>	Use personal protective equipment as required. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment and Clean Up</b>	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## 7. Handling and storage

**Handling** Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Hydrochloric acid	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup> (Vacated) Ceiling: 5 ppm (Vacated) Ceiling: 7 mg/m <sup>3</sup>	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup>	Ceiling: 2 ppm

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures** None under normal use conditions.

### Personal Protective Equipment

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Liquid
<b>Appearance</b>	Clear
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	No information available
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid,gas)</b>	Not applicable
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	No information available
<b>Specific Gravity</b>	No information available
<b>Solubility</b>	Soluble in water
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No information available

**Decomposition Temperature** No information available  
**Viscosity** No information available

## 10. Stability and reactivity

**Reactive Hazard** No

**Stability** Stable under normal conditions. Stable up to 100°C.

**Conditions to Avoid** Excess heat.

**Incompatible Materials** No information available

**Hazardous Decomposition Products** Nitrogen oxides (NOx), Ammonia

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information

##### Oral LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

##### Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

##### Vapor LC50

Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Tris (hydroxymethyl) aminomethane	LD50 = 5900 mg/kg ( Rat )	Not listed	Not listed
Ethylenediamine tetraacetic acid (EDTA)	4500 mg/kg ( Rat ) >2000 mg/kg ( Rat )	Not listed	1 mg/l (rat)
Hydrochloric acid	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	1.68 mg/L ( Rat ) 1 h

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed
Tris (hydroxymethyl) aminomethane	77-86-1	Not listed	Not listed	Not listed	Not listed	Not listed
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	Not listed	Not listed	Not listed	Not listed	Not listed
Hydrochloric acid	7647-01-0	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known  
**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Contains a substance which is: Toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethylenediamine tetraacetic acid (EDTA)	EC50: = 1.01 mg/L, 72h (Desmodesmus subspicatus)	LC50: 44.2 - 76.5 mg/L, 96h static (Pimephales promelas) LC50: 34 - 62 mg/L, 96h static (Lepomis macrochirus)	Not listed	EC50: = 113 mg/L, 48h Static (Daphnia magna)
Hydrochloric acid	-	282 mg/L LC50 96 h Gambusia affinis mg/L LC50 48 h Leuciscus idus	-	56mg/L EC50 72h Daphnia

**Persistence and Degradability** Miscible with water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

## 15. Regulatory information

### United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
Water	7732-18-5	X	ACTIVE	-
Tris (hydroxymethyl) aminomethane	77-86-1	X	ACTIVE	-
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	X	ACTIVE	-
Hydrochloric acid	7647-01-0	X	ACTIVE	-

#### Legend:

**TSCA** - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'- - Not Listed

TSCA 12(b) - Notices of Export Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Water	7732-18-5	X	-	231-791-2	X	X	X	X	KE-35400
Tris (hydroxymethyl) aminomethane	77-86-1	X	-	201-064-4	X	X	X	X	KE-01403
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	X	-	200-449-4	X	X	X	X	KE-13648
Hydrochloric acid	7647-01-0	X	-	231-595-7	X	X	X	X	KE-20189

**U.S. Federal Regulations****SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Hydrochloric acid	7647-01-0	<1%	1.0

SARA 311/312 Hazard Categories See section 2 for more information

**CWA (Clean Water Act)**

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Ethylenediamine tetraacetic acid (EDTA)	X	5000 lb	-	-
Hydrochloric acid	X	5000 lb	-	-

**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hydrochloric acid	X		-

OSHA - Occupational Safety and Health Administration

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Hydrochloric acid	-	TQ: 5000 lb

**CERCLA**

Component	Hazardous Substances RQs	CERCLA EHS RQs
Ethylenediamine tetraacetic acid (EDTA)	5000 lb	-
Hydrochloric acid	5000 lb	5000 lb

California Proposition 65 This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Water	-	-	X	-	-
Ethylenediamine tetraacetic acid (EDTA)	X	X	X	-	-
Hydrochloric acid	X	X	X	X	X

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product contains the following DHS chemicals:

**Legend** - STQs = Screening Threshold Quantities, APA = A placarded amount

Component	DHS Chemical Facility Anti-Terrorism Standard
Hydrochloric acid	Release STQs - 15000lb (concentration $\geq 37\%$ ) Release STQs - 5000lb (anhydrous) Theft STQs - 500lb (anhydrous)

**Other International Regulations****Mexico - Grade** No information available**16. Other information****Prepared By**Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com**Creation Date**

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**Revision Summary**

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**