



Material Safety Data Sheet

Tris 1 Molar Buffer

MSDS# 45485

Section 1 - Chemical Product and Company Identification

MSDS Name: Tris 1 Molar Buffer
Catalog Numbers: BP1756-100, BP1756-500, BP1757-100, BP1757-500, BP1758-100, BP1758-500
Synonyms: Tris EDTA Buffer; Tris Buffer.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases:

CAS#: 77-86-1
Chemical Name: Tris (hydroxymethyl) aminomethane
%: 10-14
EINECS#: 201-064-4
Hazard Symbols:

Risk Phrases:

CAS#: 1185-53-1
Chemical Name: Tris Hydrochloride
%: 3-4.5
EINECS#: 214-684-5
Hazard Symbols:

Risk Phrases:

CAS#: 7732-18-5
Chemical Name: Water
%: >50.0
EINECS#: 231-791-2
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: None listed

Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! The toxicological properties of this material have not been fully investigated. May cause eye and skin irritation.
May cause respiratory and digestive tract irritation. Target Organs: None known.

Potential Health Effects

Eye: May cause eye irritation.
 Skin: May cause skin irritation.
 Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.
 Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.
 Chronic: Prolonged or repeated skin contact may cause defatting and dermatitis.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
 Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
 Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
 Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
 Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
 Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.
 Autoignition Temperature: Not applicable.
 Flash Point: Not applicable.
 Explosion Limits: Lower: Not available
 Explosion Limits: Upper: Not available
 NFPA Rating: health: 1; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
 Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid ingestion and inhalation. Discard contaminated shoes.
 Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Tris (hydroxymethyl) aminomethane	none listed	none listed	none listed
Tris Hydrochloride	none listed	none listed	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs: Tris (hydroxymethyl) aminomethane: None listed Tris Hydrochloride: None listed Water: None listed
Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: clear, colorless

Odor: odorless

pH: 10

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: Not available

Decomposition Temperature: Not available

Solubility in water: Soluble in water.

Specific Gravity/Density: Not available.

Molecular Formula: Mixture

Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. Decarboxylates above 150C.

Conditions to Avoid: Incompatible materials.

Incompatibilities with Other Materials: Not available

Hazardous Decomposition Products: Carbon monoxide, carbon monoxide, carbon dioxide, nitrogen oxides (NOx) and ammonia (NH3).

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 77-86-1: TY2900000
CAS# 1185-53-1: None listed
CAS# 7732-18-5: ZC0110000

RTECS:

CAS# 77-86-1: Oral, rat: LD50 = 5900 mg/kg;

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RTECS:

LD50/LC50: CAS# 1185-53-1:

RTECS:

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;

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Tris (hydroxymethyl) aminomethane - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop

Carcinogenicity: 65.
Tris Hydrochloride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 77-86-1: 1

CAS# 1185-53-1: Not available

CAS# 7732-18-5: Not available

Canada

CAS# 77-86-1 is listed on Canada's DSL List

CAS# 1185-53-1 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not available

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 77-86-1 is not listed on Canada's Ingredient Disclosure List.

CAS# 1185-53-1 is not listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 77-86-1 is listed on the TSCA Inventory.

CAS# 1185-53-1 is listed on the TSCA Inventory.

CAS# 7732-18-5 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 6/25/1999

Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
