

Product Name: AccuGENE® TAE Buffer, 10X

Material Safety Data Sheet

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY:

Identification Of The Substance/Preparation:

Trade Name: AccuGENE® TAE Buffer, 10X

Chemical Name: Aqueous solution

Synonym: TAE Buffer; AccuGENE® Tris Acetate-EDTA Buffer Concentrate

Canada PIN: None

Use Of The Substance: For R&D/experimental use only

Company Identification:

Lonza Rockland, Inc.

191 Thomaston Street

Rockland, ME 04841-2995

USA

Business Telephone: (207) 594-340

Emergency Telephone: 703-527-3887 (US: 800-424-9300)

SECTION 2 - HAZARDS IDENTIFICATION:

Emergency Overview: Clear, colorless liquid. Can cause irritation to eyes, skin, and respiratory system.

Health Effects:

Inhalation: Mists may cause irritation to the upper respiratory system. Symptoms may include coughing and scratchy throat.

Skin: Can cause irritation. Symptoms may include redness, rash, and itching.

Eyes: Can cause eye irritation. Symptoms may include redness, tearing, and pain.

Ingestion: May cause nausea and discomfort.

Chronic Effects/Target Organ Effects: None known

Medical Conditions Aggravated By Exposure: None known

Environmental Effects: None known

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS:

<u>Components</u>	<u>EINECS #</u>	<u>CAS #</u>	<u>Weight%</u>	<u>EU Classification</u>
2-amino-2-(hydroxymethyl)-1,3-propanediol (TRIS)	201-064-4	77-86-1	4.8	Xi: R36/37/38
acetic acid	200-580-7	64-19-7	1.2	R10; C:R35

SECTION 4 - FIRST AID MEASURES:

Inhalation: Follow standard care for a respiratory emergency as necessary. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Skin: Follow standard care for skin contact as needed. Immediately wash thoroughly with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms develop. Wash clothing and shoes before reuse, or discard in a manner which limits further exposure.

Eye: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately if irritation persists.

Ingestion: If swallowed, get medical attention immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES:

Extinguishing Media: Dry chemical, fire-fighting foam, water spray, or carbon dioxide based on surrounding materials.

Special Exposure Hazards: This product is water-based. Under fire conditions organic residues remaining after the water evaporates is expected to burn generating toxic and irritating gases and smoke. Evacuate area and fight fire from safe distance.

Special Protective Equipment: Wear approved pressure-demand self-contained breathing apparatus and full protective gear.

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SECTION 6 - ACCIDENTAL RELEASE MEASURES:

Personal Precautions: Prevent skin/eye contact. Use personal protective equipment as needed. Isolate spill area, preventing entry by unauthorized persons.

Environmental Precautions: Minimize entry of material into sewers and drainage systems. Refer to permit discharge limitations if applicable.

Methods For Cleaning Up: Clean up spills immediately, observing precautions in the material safety data sheet and label. Use absorbent materials if needed and dispose into a chemical waste container.

SECTION 7 - HANDLING AND STORAGE:

Handling: Use with adequate ventilation as necessary or desired. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Follow all MSDS/label precautions. Follow precautions for packaging that may product residues. Avoid contact with skin and eyes.

Storage: Keep container tightly closed when not in use. Store at 18°-24°C.

Specific Uses: For R&D/experimental use only

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION:

Exposure Limit Values: Acetic acid: OSHA PEL/TWA: 10 ppm; ACGIH TLV/TWA: 10 ppm, TLV/STEL: 15 ppm

Exposure Controls: Use process enclosures, local exhaust ventilation, or other engineering controls as needed.

Respiratory Protection: Use an approved air-purifying respirator as needed. Consult with respirator manufacturer to determine respirator selection, use, and limitations.

Eye/Face Protection: Use safety glasses. Where contact with the eyes is likely, use chemical goggles.

Skin/Hand Protection: Use chemical gloves as needed. Use clean protective body covering clothing as needed to minimize contact with clothing and skin.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Clear or colorless liquid.

Odor:None

Flash Point:Not available

Viscosity: Not available.

Solubility:Miscible in water

Density (water = 1): .. 1.020

Partition Coefficient: . Not available

Boiling Point:~100°C

Melting Point:Not available

pH: 7~9

Other: Not available.

SECTION 10 - STABILITY AND REACTIVITY:

Stability: Stable.

Conditions To Avoid: Avoid contact with strong oxidizers.

Materials To Avoid: Strong oxidizers.

Hazardous Decomposition Products: Oxides of carbon and nitrogen.

SECTION 11 - TOXICOLOGICAL INFORMATION:

2-amino-2-(hydroxymethyl)-1,3-propanediol (TRIS): Oral LD50 - 5,900 mg/kg (rat)

acetic acid: Oral LD50: 3310 mg/kg (rat); Inhalation LC50: 11.4 mg/L/1H (rat); Dermal LD50: 1060 mg/kg (rabbit); Skin irritation: 50 mg/24 Hr - mild (rabbit)

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SECTION 12 - ECOLOGICAL INFORMATION:

Ecotoxicity: acetic acid: 96 Hr LC50 = 88 mg/L [static] (fathead minnow); 96 Hr LC50 = 75 mg/L (Bluegill); 24 Hr EC50 = 95 mg/L (Daphnia magna); EC50 = 8.8 mg/L; 5,15,25 min (Phytobacterium phosphoreum).

Mobility: acetic acid: If released to water or soil, acetic acid will biodegrade readily. Evaporation from dry surfaces is likely to occur. When spilled on soil, the liquid will spread on the surface and penetrate into the soil at a rate dependent on the soil type and its water content.

Persistence And Degradability: acetic acid: If released to the atmosphere, it is degraded in the vapor-phase by reaction with photochemically produced hydroxyl radicals (estimated typical half-life of 26.7 days). It occurs in atmospheric particulate matter in acetate form and physical removal from air can occur via wet and dry deposition. Natural waters will neutralize dilute solutions to acetate salts.

Bioaccumulative Potential: acetic acid: Acetic acid shows no potential for biological accumulation or food chain contamination.

SECTION 13 - DISPOSAL CONSIDERATIONS:

Dispose of unused product, residues, and containers according to local, regional, state, and national regulations.

SECTION 14 - TRANSPORT INFORMATION:

Not expected to be hazardous for transport

SECTION 15 - REGULATORY INFORMATION:

US Regulations:

This product meets the following SARA 311/312 hazard categories: acute.

This product contains the following SARA 302 Extremely Hazardous Substances: none.

This product contains the following SARA 313 Toxic Chemicals: none.

This product contains the following CERCLA Hazardous Substances: acetic acid has an RQ of 5,000 lbs.

Components of this product are listed in the TSCA inventory.

EU Regulations:

This preparation meets the dangerous preparations classification criteria under 1999/45/EC:

Xi: R36/37/38: Irritating to eyes, respiratory system and skin.

S23: Do not breathe vapour.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37/39: Wear suitable gloves and eye/face protection.

S45: In case of accident, or if you feel unwell, seek medical advice immediately.

Components of this product are listed on EINECS.

Canadian Regulations:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and it contains the information required by the CPR.

This product meets WHMIS classification criteria D2B. Acetic acid is listed on the Ingredient Disclosure List.

Components of this product are listed on the DSL.

SECTION 16 - OTHER INFORMATION:

NFPA/HMIS Ratings: Health = 2; Fire = 1; Reactivity = 0; NFPA/Special = None

Other Information: None

MSDS Revisions: June 2008: Rev. 2.0

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