

MATERIAL SAFETY DATA SHEET

Conforms to 93/112/EC and ISO 11014-1

1. Chemical Product and Company Identification

Product Name: ProtoGel Buffer

Product Number: EC-892

Chemical Names/

Description:

Aqueous solution of tris base and sodium dodecyl sulfate.



2. Composition/Information on Ingredients

Component	% Comp.	CAS #	EINECS #	TLV (Units)
Tris-Base	18	77-86-1	201-064-4	none established
SDS		151-21-3	205-788-1	

3. Hazards Identification

Appearance and Odor

Clear, colorless solution.

EMERGENCY OVERVIEW - IMMEDIATE HAZARD

CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. HARMFUL IF SWALLOWED OR INHALED.

EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING

CHRONIC DERMATITIS MAY FOLLOW SKIN CONTACT.

Potential Health Effects

Inhalation

Causes irritation to the respiratory tract.

Ingestion

Causes irritation and reddening to the mucous membranes of the mouth, esophagus, and gastrointestinal tract.

Skin

Causes irritation to the skin.

Eyes

Causes irritation to the eyes.

Signs and Symptoms of Overexposure**Inhalation**

Coughing, shortness of breath.

Ingestion

Symptoms may include nausea, vomiting, and diarrhea. Large oral doses may cause weakness, collapse, blood clotting, and coma. The estimated lethal dose of Tris Base is 50 grams dry solid.

Skin

Redness, itching, and pain.

Eyes

Redness, itching, and pain.

Carcinogenicity

Not listed as a carcinogen by NTP or IARC.

Mutagenicity

No information found.

Reproductive Toxicity

No information found.

Teratogenic Effects

No information found.

Routes of Entry

Ingestion.

Target Organ Statement

No information available.

4. First Aid Measures**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

Do not induce vomiting. If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Flash Point	N.A.	Flammable Limits	N.A.
Flash Point Method	N.A.	Autoignition temperature	N.A.

Extinguishing media

Use media appropriate to the primary cause of fire.

Protective Equipment

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.

Hazardous Combustion Products

Thermal decomposition products may include toxic oxides of nitrogen, sulfur, and carbon.

Unusual Fire and Explosion Hazards

N.A.

NFPA Codes: Health 1 Flammability 0 Reactivity 0

6. Accidental Release Measures

Steps to be taken in case material is released or spilled

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum. Scrub spill area with detergent, flush with copious amounts of water.

Waste Disposal Method

Disposal must be made in accordance with applicable federal, state, and local regulations.

Personal Precautions

Wear appropriate protective equipment as specified in section 8.

7. Handling and Storage

Handling

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

Storage

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

Storage Temperature

Room Temperature

Disposal

Observe all national, state, and local regulations regarding disposal.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits

Component: Tris-Base

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): none established

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures low. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection

For conditions of use where exposure to the mist is apparent, a full-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection

Wear protective gloves and clean body covering clothing.

Other Control Measures

N.A.

9. Physical Properties

Boiling point	220 F	Evaporation rate	Water
Melting point	N.A.	Solubility in water	Soluble
Vapor pressure (mmHg)	Water	pH	8.8
Vapor density (Air = 1)	N.A.	Specific gravity (H2O = 1)	1.16
% volatile by volume	81		

10. Stability and Reactivity

Stability

Stable under ordinary conditions of use and storage.

Conditions to Avoid

Incompatibles.

Hazardous Decomposition Products

Oxides of nitrogen, sulfur, and carbon may be produced upon burning.

Hazardous Polymerization

Will not occur

Incompatibles

Tris-Base:

No incompatibility data found.

SDS:

Strong oxidizers, acids.

11. Toxicological Information

Product LD50 Values

ProtoGel Buffer	Oral Rat LD50 (mg/kg):	32778
ProtoGel Buffer	Dermal Rabbit LD50 (mg/kg):	No Data

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Tris-Base	No	No	None
SDS	No	No	None

12. Ecological Information

Tris-Base

No information found on either the environmental fate or environmental toxicity of this material.

SDS

No information found.

13. Disposal Considerations

Observe all national, state, and local regulations regarding disposal.

14. Transport Information

D.O.T.

Proper Shipping Name: Not Regulated.

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

I.A.T.A.

Proper Shipping Name: Not Regulated

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

I.M.O.

Proper Shipping Name: Not Regulated.

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

15. Regulatory Information

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
Tris-Base	No	No	No	Yes	No
SDS	No	No	No	Yes	Yes

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

16. Other Information

NFPA Codes: Health 1 Flammability 0 Reactivity 0

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