

Material Safety Data Sheet

Product: 4X Resolving Buffer

Date: 01/03/2014

Product code: GPB06

1 IDENTIFICATION OF SUBSTANCE

Application of the substance / the preparation: Laboratory chemicals

Manufacturer/Supplier:

GMbiolab Co., Ltd.

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2 COMPOSITION, INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures

Description: Solution, consisting of the following components.

Component	CAS No.	Percent
SDS	151-21-3	<0.4%
Tris	77-86-1	5-15%
Hydrogen chloride	7647-01-0	1-4%

3 HAZARDS IDENTIFICATION

Occupational exposure presents little or no health hazard.

Potential Health Effects:

Eye: May cause irritation of the eye.

Skin: May cause skin irritation.

Inhalation: May cause irritation to the respiratory tract.

Ingestion: May causes irritation and reddening to the mucous membranes of the mouth, esophagus, and gastrointestinal tract.

Chronic: No data on cancer.

4 FIRST AID MEASURES

Eye: Flush with water in an eyewash for at least 15 minutes, holding eyelids open. Remove contact lenses, clean before re-use. Obtain medical attention if symptoms develop (redness, itching, etc.).

Skin: Wash with plenty of soap and water. Obtain medical attention if symptoms develop (redness, itching, etc.). Remove contaminated clothes, wash before re-use.

Inhalation: Remove person to fresh air. Obtain medical attention unless effects are mild and temporary.

Ingestion: Give plenty of water, if conscious. If vomiting occurs naturally, wash mouth out. Be prepared to induce vomiting upon a physician's advice. Obtain medical attention if symptoms develop.

Note To Physician: Treat symptomatically.

5 FIRE FIGHTING MEASURES

Flashpoint Deg C: Not available.

Autoignition Temperature Deg C: Not available.

Extinguishing Media: Use means appropriate for surrounding materials.

Firefighting Techniques/Equipment: Standard turnout gear ("bunker gear"). Positive-pressure self-contained breathing apparatus.

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Hazardous Combustion Products: Includes carbon dioxide, carbon monoxide, dense smoke.

6 ACCIDENTAL RELEASE MEASURES

Accidental releases may be subject to special reporting requirements and other regulatory mandates. Refer to Section 8 for personal protection equipment recommendations.

Spill Cleanup: Absorb spill. Common absorbent materials should be effective. Deposit in appropriate containers for removal and disposal.

7 HANDLING AND STORAGE

Storage of some materials is regulated by federal, state, and/or local laws.

Handling Procedures: Keep closed or covered when not in use.

Storage Procedures: 4°C

8 EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits: No hazardous components

Engineering Controls: Area ventilation is generally adequate.

Personal Protective Equipment:

Skin: Gloves should be used as minimum hand protection.

Respiratory: No respiratory protection will be needed under normal industrial operating conditions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/physical state: Semi-clear, colorless liquid.

Odor: No odor.

Boiling Point (C): Not tested

Melting Point (C): Not tested

Solubility in water: 100%

pH: Not tested

Vapor Pressure: Not tested

Vapor Density: Not tested

Specific Gravity/Density: Not tested

Octanol/water Partition Coeff: Not tested

Evaporation Rate: volatile

Viscosity: volatile

10 STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: None known.

Reactivity: No dangerous decomposition products known

11 TOXICOLOGICAL INFORMATION

Acute Toxicity: May be harmful by inhalation, ingestion, or skin absorption. Causes eye and skin irritation. Material is irritating to mucous membranes and upper respiratory tract.

Dermal/Skin: Not tested.

Inhalation/Respiratory: Not tested.

Oral/Ingestion: Not tested.

12 Ecological Information

No data available. Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal.

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13 DISPOSAL CONSIDERATIONS

Water Disposal: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14 TRANSPORT INFORMATION

RID/ADR: Non-hazardous for road transport.

IMDG: Non-hazardous for sea transport.

IATA: Non-hazardous for air transport.

15. REGULATORY INFORMATION

SARA (Superfund Amendment and Reauthorization Act):

Section 313 (40CFR372.65-Specific Toxic Chemicals listing):

None of the ingredients is listed.

WHMIS Classification: Not Listed

TSCA: On TSCA Inventory

Carcinogenicity categories

EPA (Environmental Protection Agency):

None of the ingredients is listed.

IARC (International Agency for Research on Cancer):

None of the ingredients is listed.

NTP (National Toxicology Program):

None of the ingredients is listed.

16 OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.