



SAFETY DATA SHEET

Revision Date 6/28/2016

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identification

Product Name : Buffer B
Product Code : Y-1045
CAS-No. : N/A; mixture

1.2 Company Identification

Peninsula Laboratories International, Inc.
305 Old County Road
San Carlos, CA 94070
USA

Telephone : (650) 801-6090
Fax : (650) 595-4071

Emergency : (650) 801-6090 (8:30am-5pm Pacific Time)

1.3 Recommended use and Restrictions on use

Laboratory reagent, Research Use Only

2. HAZARD(S) IDENTIFICATION

2.1 Classification of the mixture

GHS-US Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquid, Category 2, H225
Acute toxicity, Category 4, Oral, H302
Acute toxicity, Category 4, Inhalation, H332
Skin corrosion/irritation, Category 1A, H314
Serious eye damage/eye irritation, Category 1, H318

2.2 GHS Label elements, including precautionary statements



Hazard Pictogram :

Signal Word : Danger

Hazard statements : H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage
H332 Harmful if inhaled.

Precautionary statements : P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P235 Keep cool.
P240 Ground/bond container and receiving equipment.



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- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 Wash exposed skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301/P330/P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
- P303/P361/P353 If on skin or hair, Remove/take off all contaminated clothing. Rinse skin with water/shower.
- P304/P340 If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305/P351/P338 If in eyes, Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P321 Specific treatment (see first aid section).
- P363 Wash contaminated clothing before reuse.
- P370/P378 In case of fire: Use water spray, fog, CO₂, dry chemical or alcohol resistant foam for extinction.
- P405 Store locked up.
- P501 Dispose contents/container to an approved waste disposal plant, in compliance with local, state and federal regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance : Not applicable

3.2 Mixture :

PRINCIPLE COMPONENTS	CONCENTRATION	CAS No	GHS-US CLASSIFICATION
Acetonitrile	60%	75-05-8	Flammable liquid 2, H225 Acute Toxicity 4, Oral H302 Acute Toxicity 4, Inhalation H332 Serious eye damage 2A, H319
Trifluoroacetic Acid HPLC Grade	1%	76-05-1	Acute Toxicity 4, H332 Skin corrosion 1A, H314 Serious eye damage 1, H318
Water	39%	7732-18-5	Not classified

4. FIRST-AID MEASURES

4.1 Description of First Aid Measures

General advice: First aider needs to protect himself. Get medical advice if you feel unwell. Show this safety data sheet to the doctor in attendance.

Inhalation: Supply fresh air breathing. If not breathing, give artificial respiration. Give oxygen if necessary. Immediately consult a physician.

In case of skin contact: Immediately remove all contaminated clothing. Rinse skin with water/shower. Call a physician immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.



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In case of eye contact: Rinse out with plenty of water for at least 15 minutes. Remove contact lenses if easy to do. Immediately call an ophthalmologist.

Ingestion: Make the victim drink water (two glasses at most), avoid vomiting (risk of perforation!). Rinse mouth. Call a physician immediately. Do not attempt to neutralize.

4.2 Important Symptoms/Effects, acute and delayed

Irritation and corrosion, nausea, vomiting, cough, shortness of breath, collapse. Risk of blindness.

4.3 Required treatment

Obtain medical assistance. The exposure should be treated as a cyanide poisoning. Symptoms may be delayed.

5. FIRE-FIGHTING MEASURES

5.1 General fire hazards: Highly flammable liquid and vapor.

5.2 Extinguishing agents

Suitable extinguishing agents: Use extinguishing measures appropriate to local circumstances. Water spray, fog, CO₂, dry chemical or alcohol resistant foam.

Unsuitable extinguishing agents: Avoid water in straight hose stream; will scatter and spread fire.

5.3 Special hazards arising from the substance or mixture

Can be ignited easily and burns vigorously. Vapor from the solvent may accumulate in container headspace resulting in flammability hazard. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing flashback fire danger. Ambient fire may liberate hazardous vapors. Fire may cause evolution of hydrogen fluoride.

5.4 Advice for firefighters

Special firefighting procedures: Move containers from fire area if you can do so without risk. Use water spray (not jet) to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special Protective equipment: Must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces self-contained breathing apparatus.

5.5 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Personal precautions, protective equipment, emergency procedures: Evacuate the danger area, observe emergency procedures, consult an expert. Do not breathe vapors or aerosols. Avoid substance contact. Ensure adequate ventilation.

6.1.2 For emergency responders

Personal precautions, protective equipment, emergency procedures: Protective equipment, see section 8. Evacuate all non-emergency personnel. Stay upwind. Ventilate closed spaces before entering. Do not touch containers or spilled material unless wearing appropriate protective clothing. Contact local authorities in case of spillage to drain/aquatic environment.



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6.2 Environmental precautions: Dike for later recovery and disposal. Prevent entry into waterways. Do not empty into drains. Stop the flow of material if this can be done without risk. Inform authorities if large amounts spilled.

6.3 Methods and material for containment and cleanup: Eliminate all ignition sources if safe to do so. Cover drains. Dike far ahead of larger spill for later recovery and disposal. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Collect, bind, and pump off spills. Dispose of properly. Clean up affected area thoroughly to remove residual contamination. Observe material safe storage and handling information (section 7) and stability and reactivity (section 10).

6.4 Disposal: Dispose in accordance with local regulation.

6.5 References to other sections

See Section 8 Exposure Controls and personal protection.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling and hygiene

Avoid contact with skin and eyes and clothing. Avoid breathing mist and vapor. Use only with adequate ventilation. Provide appropriate exhaust ventilation in work area to prevent vapor buildup. Work in a fume hood. Wash hands and other exposed skin with mild soap and water after handling and before eating, drinking, or smoking and when leaving work. See precautions section 2.2

7.2 Conditions for safe storage, and incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Do not store in metal containers. Keep container closed when not in use, in a dry and well-ventilated place. Keep far from flame and heat source, prevent contact with direct sunlight. Keep away from food and drink. Follow rules for flammable liquids. Ground container and transfer equipment to eliminate static electric sparks.

7.3 Specific end use(s)

Apart from uses listed in Section 1.3, no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure limits

Chemical component	Type	Exposure Limit values	Source
Acetonitrile	TWA	20 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	20 ppm 34 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	40 ppm 70 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989)
	TWA	40 ppm 70 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	60 ppm 105 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

8.2 Engineering measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use a local exhaust ventilation that yields 10 air changes per hour. Eye wash and safety shower in work area.



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Personal protective measures: Protective clothing should be selected for the specific workplace situation, depending upon concentration and quantity of the hazardous substance. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures: Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and or smoking. Routinely wash work clothing to remove contaminants. Immediately change contaminated clothing. Apply skin protective barrier cream. Discard contaminated footwear that cannot be cleaned.

Eye/face protection: Wear safety glasses with side shields (or goggles). Wear face shield if there is risk of splashes.

Hand protection: Chemical-resistant, impervious gloves in compliance with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other: Acid-resistant protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: In case of inadequate ventilation or where risk assessment shows air-purifying respirators are appropriate, use a properly fitted air-purifying or air-fed respirator, complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Chemical respirator with organic vapor cartridge and full face piece.

Other information: Do not eat, drink, or smoke during use.

Control of environmental exposure: Prevent further leakage and spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	: Liquid
Color	: colorless
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative vapor density at 20C	: No data available
Relative density	: No data available
Density	: No data available
Solubility	: Soluble in water
Log Pow	: No data available
Log Kow	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available



10. STABILITY AND REACTIVITY

10.1 Reactivity

See below

10.2 Chemical stability

Heat sensitive.

10.3 Possibility of hazardous reactions

Risk of explosion with lithium aluminum hydride

Exothermic reaction with alkalines

Generates dangerous gases or fumes in contact with acids

10.4 Conditions to avoid

Heat, sparks, flames.

10.5 Incompatible materials

Strong oxidizing agents. Strong acids. Nitrates. Rubber, metals.

10.6 Hazardous decomposition products

In the event of fire: see section 5. Carbon dioxide. Carbon monoxide. Nitrogen oxides. Cyanides.

11. TOXICOLOGICAL INFORMATION

General information: Cyanosis may result from overexposure to vapor or skin exposure.

Information on likely routes of exposure

Likely route of exposure

Inhalation, eye contact, skin contact

Acute oral toxicity

Harmful if swallowed. Irritating. Symptoms: nausea, vomiting, strong pain (risk of perforation). If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity

Harmful if inhaled. Spray mists irritate the respiratory system, and cause coughing and difficulties in breathing. Corrosive to the respiratory system.

Absorption

Symptoms: mucosal irritations, cough, shortness of breath.

Possible damages: damage of the respiratory tract, inhalation may lead the formation of edemas in the respiratory tract.

Skin irritation

Rabbit

Result: causes burns. Necrosis causes poorly healing wounds. Causes severe burns.

Prolonged or repeated skin contact may cause drying, cracking, or irritation. May be harmful in contact with skin.

Serious eye damage/irritation

Causes serious eye irritation. Risk of blindness.

Information on toxicological effects

Acute toxicity



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Oral (Acetonitrile) LD 50 (rat): 1320 mg/kg
Dermal (Acetonitrile) LD 50 (rabbit): > 2000 mg/kg
Inhalation (Acetonitrile) LD 50 (rabbit, 4 hr): 2828 ppm
LD50 (rat, 8hr): 7500 ppm

Repeated dose toxicity: No data available

Skin corrosion/irritation (Acetonitrile): Causes mild skin irritation.

Serious eye damage/eye irritation (Acetonitrile): Causes serious eye irritation.

Respiratory or skin sensitization (Acetonitrile): Not a skin nor a respiratory sensitizer.

Genotoxicity in vitro

Ames test
Salmonella typhimurium
Result: negative
(external SDS)

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by OSHA.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH/

Reproductive toxicity

No data available.

Specific target organ toxicity (single exposure)

No data available.

Specific target organ toxicity (repeated exposure)

No data available.

Aspiration hazard

No data available.

Further information

Systemic effects: collapse
Damage to kidney
Handle in accordance with good industrial hygiene and safety practice.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It is the users' responsibility to determine the suitability of this information for the adoption of safety precautions as may be necessary. Peninsula Laboratories International, Inc. shall not be held liable for any damage resulting from the handling of the above product.