

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

Responsible Name Regulatory Affairs

? **Section 1. Chemical Product and Company Identification**

Product name **Mem-PER® Buffer**

Product No. 89864D

Supplier Pierce Chemical Company
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Rockford, IL 61105
USA
815.968.0747 or
1.800.874.3723

Manufacturer Pierce Milwaukee LLC
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202.483.7616

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Validation Date **2/13/2003**
MSDS# 4194

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

 **Section 2. Composition, Information on Ingredients**

Substance/Preparation : Preparation

<u>Ingredient Name</u>	<u>CAS No.</u>	<u>%</u>	<u>EC Number</u>	<u>Symbol</u>	<u>R-Phrases</u>
1) Ingredient 1		1-3	201-064-4	Xi	R36/37/38
2) Ingredient 2		3-5	231-598-3	--	Not controlled under dsd (Europe).
3) Ingredient 3		95-98	231-791-2	--	Not controlled under dsd (Europe).

 **Section 3. Hazards Identification**

United States Review the most current and approved institutional guideline, protocol, standard operating procedure(s) and MSDS(s) for the proper handling of institutional materials/equipment associated with the use of this product.

Emergency Overview CAUTION!
CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING
ORGANS: LUNGS, RESPIRATORY TRACT, SKIN, EYES, STOMACH.

Routes of Entry Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects Slightly hazardous in case of ingestion, of inhalation.

Carcinogenic Effects Data **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Ingredient 2].
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical Conditions Aggravated by Overexposure: Repeated or prolonged exposure is not known to aggravate medical condition.

Overexposure /Signs/Symptoms Not available.

Europe

Classification Not controlled under dsd (Europe).

Physical/chemical hazards Not applicable.

Human health hazards Not applicable.

Environmental hazards Not applicable.

See Toxicological Information (section 11)

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Section 4. First Aid Measures

Notice to Reader Get immediate medical attention.

Effects and symptoms

Inhalation Slightly hazardous in case of inhalation.

Ingestion Slightly hazardous in case of ingestion.

Skin Contact Irritation of the product in case of skin contact: Not available. Sensitization of the product: Not available.

Eye Contact Not available.

Aggravating conditions Repeated or prolonged exposure is not known to aggravate medical condition.

First-Aid Measures

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Skin Contact In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Notes to Physician Not available.

Protection of first-aiders Not available.

Section 5. Fire Fighting Measures

Flammability of the Product May be combustible at high temperature.

Flash Points Not available.

Fire Hazards in Presence of Various Substances Not considered to be flammable.

Fire Fighting Media SMALL FIRE: Use DRY chemical powder.

and Instructions LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Protective Clothing (Fire) Be sure to use an approved/certified respirator or equivalent.

Hazardous thermal (de)composition products Not available.

Section 6. Accidental Release Measures

Personal precautions Safety glasses. Lab coat.

Environmental Precautions and Clean-up Methods Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Small Spill and Leak Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Section 7. Handling and Storage

Handling Avoid breathing vapors or spray mists.

Storage Keep container tightly closed. Keep container in a cool, well-ventilated area.

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

Packaging materials

Suitable / Not suitable Use original container.

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Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Exposure Limit Values

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
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United States

1) Ingredient 1	Not available.
2) Ingredient 2	Not available.

Sweden

1) Ingredient 1	Not available.
2) Ingredient 2	Not available.
3) Ingredient 3	Not available.

Denmark

1) Ingredient 1	Not available.
2) Ingredient 2	Not available.
3) Ingredient 3	Not available.

Norway

1) Ingredient 1	Not available.
2) Ingredient 2	Not available.
3) Ingredient 3	Not available.

France

1) Ingredient 1	Not available.
2) Ingredient 2	Not available.
3) Ingredient 3	Not available.

Netherlands

1) Ingredient 1	Not available.
2) Ingredient 2	Not available.
3) Ingredient 3	Not available.

Germany

1) Ingredient 1	Not available.
2) Ingredient 2	Not available.
3) Ingredient 3	Not available.

Personal Protection

Eyes Splash goggles.

Body Lab coat.

Hands Gloves.

Respiratory Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

Protective Clothing
(Pictograms)



Section 9. Physical and Chemical Properties

Physical State and Appearance Liquid.

Odor Not available.

Molecular Weight Not applicable.

Taste Not available.

pH (1% Soln/Water) 7.5 [Basic.]

Color Clear

Boiling/Condensation Point The lowest known value is 100°C (212°F) (Ingredient 3).

Melting/Freezing Point May start to solidify at -0.1°C (31.8°F) based on data for: Ingredient 3.

Specific Gravity The only known value is 1 (Water = 1) (Ingredient 3).

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Vapor Pressure The highest known value is 2.3 kPa (@ 20°C) (Ingredient 3).

Vapor Density The highest known value is 0.62 (Air = 1) (Ingredient 3).

Evaporation Rate 0.36 (Ingredient 3) compared to Butyl acetate.

Dispersion Properties See solubility in water, acetone.

Solubility Easily soluble in cold water.
Soluble in hot water.
Partially soluble in acetone.
Very slightly soluble in methanol.



Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Conditions to avoid Not available.

Materials to avoid Slightly reactive to reactive with oxidizing agents, metals, acids, alkalis.

Hazardous Decomposition Products Not available.



Section 11. Toxicological Information

Toxicity to Animals Acute oral toxicity (LD50): 5900 mg/kg [Rat]. (Ingredient 1).

Chronic Effects on Humans **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Ingredient 2].
Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin, eyes, stomach.

Other Toxic Effects on Humans Slightly hazardous in case of ingestion, of inhalation.

Special Remarks on Toxicity to Animals Not available.

Special Remarks on Chronic Effects on Humans Not available.

Special Remarks on Other Toxic Effects on Humans To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated. (Ingredient 1)



Section 12. Ecological Information

Mobility Not available.

Persistence/degradability Not available.

Bioaccumulative potential Not available.

Ecotoxicity Not available.

Germany water class VCI WGK: No products were found.



Section 13. Disposal Considerations

Waste Information Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Waste Stream Not available.

Consult your local or regional authorities.

Section 14. Transport Information

Contact the supplier for all information regarding the proper transportation method for this material.

Section 15. Regulatory Information

Label Requirements (Europe)

This product is not classified according to the EU regulations.

HCS Classification Target organ effects.

U.S. Federal Regulations TSCA 8(b) inventory: Ingredient 1; Ingredient 3

SARA 302/304/311/312 extremely hazardous substances: No products were found.
 SARA 302/304 emergency planning and notification: No products were found.
 SARA 302/304/311/312 hazardous chemicals: No products were found.
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
 SARA 313 toxic chemical notification and release reporting: No products were found.
 Clean Water Act (CWA) 307: No products were found.
 Clean Water Act (CWA) 311: No products were found.
 Clean air act (CAA) 112 accidental release prevention: No products were found.
 Clean air act (CAA) 112 regulated flammable substances: No products were found.
 Clean air act (CAA) 112 regulated toxic substances: No products were found.

WHMIS (Canada) CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

CEPA DSL: Ingredient 1; Ingredient 2; Ingredient 3

International Regulations

EINECS Not available.

DSCL (EEC) This product is not classified according to the EU regulations.

International Lists Australia (NICNAS): Ingredient 1; Ingredient 2; Ingredient 3

Korea (TCCL): Ingredient 1; Ingredient 2; Ingredient 3

Philippines (RA6969): Ingredient 1; Ingredient 2; Ingredient 3

State Regulations No products were found.

California prop. 65: No products were found.

Section 16. Other Information

Hazardous Material Information System (U.S.A.)

Health	*	1
Fire Hazard		0
Reactivity		1
Personal Protection		a

National Fire Protection Association (U.S.A.)



References Not available.

History of Document Changes Any information changes since last document version are marked with a triangle symbol.

Full text of R-Phrases Irritating to eyes, respiratory system and skin.
referenced under headings 2 and 3: Not applicable.
 Not applicable.

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

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Version

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Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.