

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

Responsible Name Pierce Administration

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

Product name **North2South® Blocking Buffer**

Product No. 1856225

Supplier	<i>In USA:</i> Pierce P.O. Box 117 Rockford, IL 61105 USA 815.968.0747 or 1.800.874.3723	<i>In Europe:</i> Perbio Science Industriezone III Industrielaan 27 9320 Eredebodegem-Aalst Belgium Tel:+32 53 83 44 04 Fax:+32 53 83 76 38	Manufacturer	Pierce Milwaukee LLC 2202 N. Bartlett Avenue Milwaukee, WI 53202-1009 USA 1.877.886.7629
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In Case of Emergency CALL CHEMTREC:

800.424.9300
OUTSIDE US:
202.483.7616

Print Date 2/4/2003

Validation Date **2/4/2003**

MSDS# 6674

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

Ingredient Name	CAS No.	%	EC Number	Symbol	R-Phrases
1) Blocking Buffer Component 2		0.1-1	xxx-xxx-x	Xi	R36/37/38
2) Blocking Buffer Component 3		0.1-1	Not available.	Xi	R36/37/38
3) Blocking Buffer Component 4		0.1-1	xxx-xxx-x	Xn	R20/21/22, R36/37/38
4) Blocking Buffer Component 5		0.1-1	xxx-xxx-x	Xi	R36

 **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 WARNING!
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
LUNGS, MUCOUS MEMBRANES, RESPIRATORY TRACT, SKIN, EYES, STOMACH.
MAY BE HARMFUL IF SWALLOWED.
Do not ingest. Wash thoroughly after handling.

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

Potential Acute Health Effects Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung corrosive).

Carcinogenic Effects Data **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Blocking Buffer Component 2]. Classified None. by NIOSH [Blocking Buffer Component 4].

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Classified None. for human [Blocking Buffer Component 4].

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.

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See Toxicological Information (section 11)

Section 4. First Aid Measures

Notice to Reader Get immediate medical attention.

Effects and symptoms

Inhalation Slightly hazardous in case of inhalation (lung corrosive).

Ingestion Slightly hazardous in case of ingestion.

Skin Contact Sensitization of the product: Not available.

Slightly hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Eye Contact Slightly hazardous in case of eye contact (irritant).

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. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin Contact Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

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 if irritation occurs.

Notes to Physician Not available.

Protection of first-aiders Not available.

Section 5. Fire Fighting Measures

Flammability of the Product Non-flammable.

Flash Points Not available.

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

Fire Fighting Media and Instructions SMALL FIRE: Use DRY chemical powder.

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 applicable.

Section 6. Accidental Release Measures

Personal precautions Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

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.

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Section 7. Handling and Storage

Handling Do not ingest. Wash thoroughly after handling.

Storage Keep container tightly closed. Keep container in a cool, well-ventilated area. Store between 2 to 8°C (35.6 to 46.4°F).

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.

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

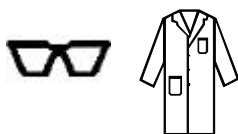
<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
United States	
1) Blocking Buffer Component 4	Not available.
Sweden	
1) Blocking Buffer Component 1	Not available.
2) Blocking Buffer Component 2	Not available.
3) Blocking Buffer Component 3	Not available.
4) Blocking Buffer Component 4	Not available.
5) Blocking Buffer Component 5	Not available.
Denmark	
1) Blocking Buffer Component 1	Not available.
2) Blocking Buffer Component 2	Not available.
3) Blocking Buffer Component 3	Not available.
4) Blocking Buffer Component 4	Not available.
5) Blocking Buffer Component 5	Not available.
Norway	
1) Blocking Buffer Component 1	Not available.
2) Blocking Buffer Component 2	Not available.
3) Blocking Buffer Component 3	Not available.
4) Blocking Buffer Component 4	Not available.
5) Blocking Buffer Component 5	Not available.
France	
1) Blocking Buffer Component 1	Not available.
2) Blocking Buffer Component 2	Not available.
3) Blocking Buffer Component 3	Not available.
4) Blocking Buffer Component 4	Not available.
5) Blocking Buffer Component 5	Not available.
Netherlands	
1) Blocking Buffer Component 1	Not available.
2) Blocking Buffer Component 2	Not available.
3) Blocking Buffer Component 3	Not available.
4) Blocking Buffer Component 4	Not available.
5) Blocking Buffer Component 5	Not available.
Germany	
1) Blocking Buffer Component 1	Not available.
2) Blocking Buffer Component 2	Not available.
3) Blocking Buffer Component 3	Not available.
4) Blocking Buffer Component 4	Not available.
5) Blocking Buffer Component 5	Not available.

Personal Protection

Eyes Safety glasses.

Body Lab coat.

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Protective Clothing
(Pictograms)

Section 9. Physical and Chemical Properties

Physical State and Appearance Liquid.

Odor Not available.

Molecular Weight Not applicable.

Taste Not available.

Boiling/Condensation Point The lowest known value is 100°C (212°F) (North2South® Direct Nuclease-Free Water).

Color Not available.

Melting/Freezing Point May start to solidify at 0°C (32°F) based on data for: North2South® Direct Nuclease-Free Water.

Specific Gravity Weighted average: 0.99 (Water = 1)

LogK_{ow} The product is much more soluble in water.

Dispersion Properties See solubility in water, methanol.

Solubility Soluble in cold water, hot water, methanol.
Insoluble in diethyl ether, n-octanol.

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 acids.
Non-reactive with oxidizing agents.

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products Not applicable.

Section 11. Toxicological Information

Toxicity to Animals Acute oral toxicity (LD50): 1288 mg/kg [Rat]. (Blocking Buffer Component 4).

Chronic Effects on Humans **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Blocking Buffer Component 2]. Classified None. by NIOSH [Blocking Buffer Component 4].
TERATOGENIC EFFECTS: Classified None. for human [Blocking Buffer Component 4].

Other Toxic Effects on Humans Slightly hazardous in case of eye contact (irritant), 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 Not available.



Section 12. Ecological Information

<i>Mobility</i>	Not available.
<i>Persistence/degradability</i>	Not available.
<i>Bioaccumulative potential</i>	Not available.
<i>Ecotoxicity</i>	Not available.
<i>Germany water class</i>	VCI WGK: No products were found.



Section 13. Disposal Considerations

<i>Waste Information</i>	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
<i>Waste Stream</i>	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

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U.S. Federal Regulations

TSCA 8(b) inventory: Blocking Buffer Component 1; Blocking Buffer Component 2; Blocking Buffer Component 4; Blocking Buffer Component 5; Blocking Buffer Component 6
 TSCA 8(d) H and S data reporting: Blocking Buffer Component 4
 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: Blocking Buffer Component 2; Blocking Buffer Component 4; Blocking Buffer Component 5
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Blocking Buffer Component 2: immediate health hazard; Blocking Buffer Component 4: immediate health hazard, delayed health hazard; Blocking Buffer Component 5: immediate health hazard, delayed health hazard
 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: Blocking Buffer Component 2
 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: Blocking Buffer Component 1; Blocking Buffer Component 2; Blocking Buffer Component 4; Blocking Buffer Component 5; Blocking Buffer Component 6

International Regulations

EINECS Not available.

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

International Lists

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Australia (NICNAS): Blocking Buffer Component 1; Blocking Buffer Component 2; Blocking Buffer Component 3; Blocking Buffer Component 4; Blocking Buffer Component 5; Blocking Buffer Component 6

Germany water class: Blocking Buffer Component 2; Blocking Buffer Component 4

Korea (TCCL): Blocking Buffer Component 1; Blocking Buffer Component 2; Blocking Buffer Component 4; Blocking Buffer Component 5; Blocking Buffer Component 6

Philippines (RA6969): Blocking Buffer Component 1; Blocking Buffer Component 2; Blocking Buffer Component 4; Blocking Buffer Component 5; Blocking Buffer Component 6

State Regulations Pennsylvania RTK: Blocking Buffer Component 2: (environmental hazard, generic environmental hazard)

Massachusetts RTK: Blocking Buffer Component 2

New Jersey: Blocking Buffer Component 2

California prop. 65: No products were found.

Section 16. Other Information

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

Health	*	0
Fire Hazard		0
Reactivity		0
Personal Protection		g

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 referenced under headings 2 and 3:

- Not applicable.
- Irritating to eyes, respiratory system and skin.
- Irritating to eyes, respiratory system and skin.
- Harmful by inhalation, in contact with skin and if swallowed.
- Irritating to eyes, respiratory system and skin.
- Irritating to eyes.

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

Validated by Pierce Administration on 2/4/2003.

Verified by Pierce Administration.

Date of Previous Issue

1/15/2003

Printed 2/4/2003.

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.