

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

Responsible Name Pierce Administration

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

Product name **StartingBlock™ (TBS) Blocking Buffer**

Product No. 0037542

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 Erembodegem-Aalst Belgium Tel:+32 53 83 44 04 Fax:+32 53 83 76 38	Manufacturer	Pierce Biotechnology P.O. Box 117 Rockford, IL 61105 USA 815.968.0747 or 1.800.874.3723
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In Case of Emergency CALL CHEMTREC:

800.424.9300
OUTSIDE US:
202.483.7616

Print Date 6/16/2003

Validation Date **6/16/2003**

MSDS# 6782

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) Ingredient Name #3		0.1-1	Not available.	--	Not controlled under dsd (Europe).
2) Ingredient Name #5		3-5	200-334-9	Xi	R36/37/38

 **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, RESPIRATORY TRACT, SKIN, EYES, EYE, LENS OR CORNEA, STOMACH.

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

Potential Acute Health Effects Slightly hazardous in case of ingestion.

Carcinogenic Effects Data **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Sodium Chloride]. Classified None. by NIOSH [Ingredient Name #5]. Classified A4 (Not classifiable for human or animal.) by ACGIH [Ingredient Name #5].
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 Not available.

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 Non-flammable.

Flash Points Not applicable.

Fire Hazards in Presence of Various Substances Not applicable.

Fire Fighting Media and Instructions Not applicable.

Protective Clothing (Fire) Not applicable.

Hazardous thermal (de)composition products Not applicable.

Section 6. Accidental Release Measures

Personal precautions Safety glasses. Lab coat. 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. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

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.

Exposure Limit Values

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
United States	
1) Ingredient Name #5	TWA: 10 (mg/m ³) from ACGIH (TLV) [United States] [2000] Inhalation TWA: 5 (ppb) from OSHA (PEL) [United States] [1989] Inhalation Respirable.
Sweden	
1) Ingredient Name #3	Not available.
2) Ingredient Name #5	Not available.
Denmark	
1) Ingredient Name #3	Not available.
2) Ingredient Name #5	Not available.
Norway	
1) Ingredient Name #3	Not available.
2) Ingredient Name #5	Not available.
France	
1) Ingredient Name #3	Not available.
2) Ingredient Name #5	TWA: 10 (mg/m ³) from INRS [France] [1999] Inhalation
Netherlands	
1) Ingredient Name #3	Not available.
2) Ingredient Name #5	TWA: 10 (mg/m ³) from Arbeidsinspectie [Netherlands] [2000] Inhalation
Germany	
1) Ingredient Name #3	Not available.
2) Ingredient Name #5	Not available.

Personal Protection

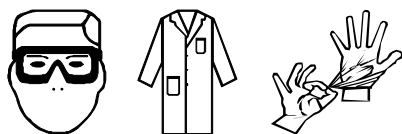
Eyes Splash goggles.

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 Bland.

Molecular Weight Not applicable.

Taste Not available.

pH (1% Soln/Water) 7.4 to 7.6 [Basic.]

Color Yellow.

Boiling/Condensation Point The lowest known value is 100°C (212°F) (Milli-Q Water).

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

Specific Gravity Weighted average: 1.02 (Water = 1)

Vapor Pressure The highest known value is 2.3 kPa (@ 20°C) (Milli-Q Water).

Vapor Density The highest known value is 0.62 (Air = 1) (Milli-Q Water).

Evaporation Rate 0.36 (Milli-Q Water) compared to Butyl acetate.

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Dispersion Properties See solubility in water, acetone.

Solubility Soluble in cold water, hot water.
Partially soluble in acetone.



Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Conditions to avoid Not available.

Materials to avoid 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): 29700 mg/kg [Rat]. (Ingredient Name #5).

Chronic Effects on Humans **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Sodium Chloride]. Classified None. by NIOSH [Ingredient Name #5]. Classified A4 (Not classifiable for human or animal.) by ACGIH [Ingredient Name #5].

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

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 Name #5)



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: Tris(hydroxymethyl)aminomethane; Sodium Chloride; Ingredient Name #5; 5-Chloro-2-methyl-4-isothiazolin-3-one; 2-Methyl-4-isothiazoline-3-one; Magnesium Chloride; Magnesium Nitrate; Water; Milli-Q Water
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: Sodium Chloride; Ingredient Name #5; Magnesium Nitrate
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Chloride: immediate health hazard, delayed health hazard; Ingredient Name #5: delayed health hazard; Magnesium Nitrate: fire

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: Tris(hydroxymethyl)aminomethane; Sodium Chloride; Ingredient Name #5; 5-Chloro-2-methyl-4-isothiazolin-3-one; 2-Methyl-4-isothiazoline-3-one; Magnesium Chloride; Magnesium Nitrate; Water; Milli-Q Water

International Regulations

EINECS Not available.

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

International Lists Australia (NICNAS): Tris(hydroxymethyl)aminomethane; Sodium Chloride; Ingredient Name #5; 5-Chloro-2-methyl-4-isothiazolin-3-one; 2-Methyl-4-isothiazoline-3-one; Magnesium Chloride; Magnesium Nitrate; Water; Milli-Q Water

Germany water class: Sodium Chloride

Korea (TCCL): Tris(hydroxymethyl)aminomethane; Sodium Chloride; Ingredient Name #5; 5-Chloro-2-methyl-4-isothiazolin-3-one; 2-Methyl-4-isothiazoline-3-one; Magnesium Chloride; Magnesium Nitrate; Water; Milli-Q Water

Philippines (RA6969): Tris(hydroxymethyl)aminomethane; Sodium Chloride; Ingredient Name #5; 5-Chloro-2-methyl-4-isothiazolin-3-one; 2-Methyl-4-isothiazoline-3-one; Magnesium Chloride; Magnesium Nitrate; Water; Milli-Q Water

State Regulations Pennsylvania RTK: Ingredient Name #5: (generic environmental hazard); Magnesium Nitrate: (generic environmental hazard)

Massachusetts RTK: Ingredient Name #5; Magnesium Nitrate

New Jersey: Magnesium Nitrate

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		a

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



References Not available.

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StartingBlock™ (TBS) Blocking Buffer

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



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

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

Validated by Pierce Administration on 6/16/2003.

Verified by Pierce Administration.

Date of Previous Issue No Previous Validation

Printed 6/16/2003.

Version

2.01

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.