

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

Responsible Name Pierce Administration

## ? Section 1. Chemical Product and Company Identification

Product name **Easy-Titer® Dilution Buffer**

Product No. 1856172

<b>Supplier</b>	<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	<b>Manufacturer</b>	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 11/19/2002

Validation Date **11/4/2002**

MSDS# 3813

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) Dilution Buffer Component 2		7-10	200-272-2	--	Not controlled under dsd (Europe).
2) Dilution Buffer Component 3		0.1-1	231-598-3	Xi	R36/37/38
3) Dilution Buffer Component 4		0.1-1	231-448-7	Xi	R36/37/38
4) Sodium Azide	26628-22-8	0-0.1	247-852-1	T+, N	R28, R32, R50/53

## ! 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:  
KIDNEYS, NERVOUS SYSTEM, MUCOUS MEMBRANES, HEART, BRAIN,  
CARDIOVASCULAR SYSTEM, RESPIRATORY TRACT, SKIN, EYES, CENTRAL  
NERVOUS SYSTEM, EYE, LENS OR CORNEA, 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 ingestion, of inhalation.

**Carcinogenic Effects Data** **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Dilution Buffer Component 3]. Classified None. by NIOSH [Dilution Buffer Component 4]. Classified None. by NIOSH [Sodium Azide]. Classified A4 (Not classifiable for human or animal.) by ACGIH [Sodium Azide].  
**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 R22

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<i>Physical/chemical hazards</i>	Not applicable.
<i>Human health hazards</i>	Harmful if ingested.
<i>Environmental hazards</i>	Not applicable.

See Toxicological Information (section 11)

## Section 4. First Aid Measures

**Notice to Reader** Get immediate medical attention.

### **Effects and symptoms**

<i>Inhalation</i>	Slightly hazardous in case of inhalation.
<i>Ingestion</i>	Slightly hazardous in case of ingestion.
<i>Skin Contact</i>	Irritation of the product in case of skin contact: Not available. Sensitization of the product: Not available.
<i>Eye Contact</i>	Not available.
<i>Aggravating conditions</i>	Repeated or prolonged exposure is not known to aggravate medical condition.

### **First-Aid Measures**

<i>Inhalation</i>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<i>Ingestion</i>	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.
<i>Skin Contact</i>	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.
<i>Eye Contact</i>	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.
<i>Notes to Physician</i>	Not available.
<i>Protection of first-aiders</i>	Not available.

## Section 5. Fire Fighting Measures

<i>Flammability of the Product</i>	Non-flammable.
<i>Flash Points</i>	Not applicable.
<i>Fire Hazards in Presence of Various Substances</i>	Not applicable.
<i>Fire Fighting Media and Instructions</i>	Not applicable.
<i>Protective Clothing (Fire)</i>	Not applicable.
<i>Hazardous thermal (de)composition products</i>	Not applicable.

## Section 6. Accidental Release Measures

<i>Personal precautions</i>	Safety glasses. Lab coat.
<i>Environmental Precautions and Clean-up Methods</i>	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.
<i>Small Spill and Leak</i>	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.

### Exposure Limit Values

#### Ingredient Name

#### Occupational Exposure Limits

#### United States

1) Dilution Buffer Component 2 Not available.

#### Sweden

1) Dilution Buffer Component 2 Not available.  
2) Dilution Buffer Component 3 Not available.  
3) Dilution Buffer Component 4 Not available.  
4) Sodium Azide Not available.

#### Denmark

1) Dilution Buffer Component 2 Not available.  
2) Dilution Buffer Component 3 Not available.  
3) Dilution Buffer Component 4 Not available.  
4) Sodium Azide TWA: 0.3 CEIL: 0.3 (mg/m<sup>3</sup>) from Arbejdstilsynet [Denmark] [1996] Inhalation

#### Norway

1) Dilution Buffer Component 2 Not available.  
2) Dilution Buffer Component 3 Not available.  
3) Dilution Buffer Component 4 Not available.  
4) Sodium Azide TWA: 0.3 CEIL: 0.3 (mg/m<sup>3</sup>) from Arbejdstilsynet [Norway] [1996] Inhalation

#### France

1) Dilution Buffer Component 2 Not available.  
2) Dilution Buffer Component 3 Not available.  
3) Dilution Buffer Component 4 Not available.  
4) Sodium Azide STEL: 0.1 (ppm) from INRS [France] [1999] Inhalation

#### Netherlands

1) Dilution Buffer Component 2 Not available.  
2) Dilution Buffer Component 3 Not available.  
3) Dilution Buffer Component 4 Not available.  
4) Sodium Azide TWA: 0.3 CEIL: 0.1 (ppm) from Arbeidsinspectie [Netherlands] [2000] Inhalation

#### Germany

1) Dilution Buffer Component 2 Not available.  
2) Dilution Buffer Component 3 Not available.  
3) Dilution Buffer Component 4 Not available.  
4) Sodium Azide TWA: 0.2 CEIL: 0.1 (mg/m<sup>3</sup>) from BAuA [Germany] [1999] Inhalation

### 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)

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## 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)** Neutral.

**Color** Clear Colorless to light 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: 1.01 (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.

**LogK<sub>ow</sub>** The product is much more soluble in water.

**Dispersion Properties** See solubility in water, methanol.

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

## Section 10. Stability and Reactivity

**Stability and Reactivity** The product is stable.

**Conditions to avoid** Reacts violently with water especially when water is added to the product. Heating may cause an explosion. Keep away from heat (Sodium Azide)

**Materials to avoid** Slightly reactive to reactive with oxidizing agents, acids.

**Hazardous Polymerization** Will not occur.

**Hazardous Decomposition Products** Not applicable.

## Section 11. Toxicological Information

**Toxicity to Animals** Acute oral toxicity (LD50): 4920 mg/kg [Mouse]. (Dilution Buffer Component 2).

**Chronic Effects on Humans** **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Dilution Buffer Component 3]. Classified None. by NIOSH [Dilution Buffer Component 4]. Classified None. by NIOSH [Sodium Azide]. Classified A4 (Not classifiable for human or animal.) by ACGIH [Sodium Azide].

**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.

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## 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

*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)

R22- Harmful if swallowed.

S2- Keep out of the reach of children.

S46- If swallowed, seek medical advice immediately and show this container or label.



**Harmful**

**HCS Classification** Target organ effects.

**U.S. Federal Regulations** TSCA 8(b) inventory: Dilution Buffer Component 1; Dilution Buffer Component 2; Dilution Buffer Component 3; Dilution Buffer Component 4; Sodium Azide; Milli-Q Water  
TSCA 8(d) H and S data reporting: Sodium Azide  
SARA 302/304/311/312 extremely hazardous substances: Sodium Azide  
SARA 302/304 emergency planning and notification: Sodium Azide  
SARA 302/304/311/312 hazardous chemicals: Dilution Buffer Component 3; Dilution Buffer Component 4; Sodium Azide  
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Dilution Buffer Component 3: immediate health hazard, delayed health hazard; Dilution Buffer Component 4: immediate health hazard; Sodium Azide: immediate health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Dilution Buffer Component 4

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.

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*WHMIS (Canada)* Not controlled under WHMIS (Canada).

CEPA DSL: Dilution Buffer Component 1; Dilution Buffer Component 2; Dilution Buffer Component 3; Dilution Buffer Component 4; Sodium Azide; Milli-Q Water

CEPA NDSL: Sodium Azide

*International Regulations*

*EINECS* Not available.

*DSCL (EEC)* R22- Harmful if swallowed.

*International Lists* Australia (NICNAS): Dilution Buffer Component 1; Dilution Buffer Component 2; Dilution Buffer Component 3; Dilution Buffer Component 4; Sodium Azide; Milli-Q Water

Germany water class: Dilution Buffer Component 3; Dilution Buffer Component 4; Sodium Azide

Korea (TCCL): Dilution Buffer Component 2; Dilution Buffer Component 3; Dilution Buffer Component 4; Sodium Azide; Milli-Q Water

Philippines (RA6969): Dilution Buffer Component 1; Dilution Buffer Component 2; Dilution Buffer Component 3; Dilution Buffer Component 4; Sodium Azide; Milli-Q Water

*State Regulations* Pennsylvania RTK: Dilution Buffer Component 4: (environmental hazard, generic environmental hazard); Sodium Azide: (environmental hazard, generic environmental hazard)  
 Florida: Sodium Azide  
 Minnesota: Sodium Azide  
 Massachusetts RTK: Dilution Buffer Component 4; Sodium Azide  
 New Jersey: Dilution Buffer Component 4; Sodium Azide  
**California prop. 65: No products were found.**

**Section 16. Other Information**

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

Health	*	1
Fire Hazard		0
Reactivity		0
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 referenced under headings 2 and 3:*  
 Not applicable.  
 Irritating to eyes, respiratory system and skin.  
 Irritating to eyes, respiratory system and skin.  
 Very toxic if swallowed.  
 Contact with acids liberates very toxic gas.

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

Validated by Pierce Administration on 11/4/2002.

Verified by Pierce Administration.

Date of Previous Issue No Previous Validation

Printed 11/19/2002.

Version 0.01

**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.*