

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

Responsible Name MSDS Administrator

? Section 1. Chemical Product and Company Identification

Product Name IgG Binding Buffer

Product no. 21011 21019 1852010 1856203 1858605 1885260 1890247 1901349

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 CHEMTREC:
800.424.9300
OUTSIDE US:
703.527.3887

Print date 11/20/2006
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MSDS# 2231

Use of the substance/preparation 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

No hazardous ingredient according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Directives 1999/45/EC-2001/59/EC (EU)

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 No specific hazard.

Routes of entry Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes No known significant effects or critical hazards.

Skin No known significant effects or critical hazards.

Inhalation No known significant effects or critical hazards.

Ingestion No known significant effects or critical hazards.

Potential chronic health effects

Carcinogenic effects **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Sodium Acetate Trihydrate pHix Buffer Grade].
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical conditions aggravated by overexposure Repeated or prolonged exposure is not known to aggravate medical condition.

Over-exposure signs/symptoms Not available.

Europe

Classification Not classified.

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

Effects and symptoms

- Inhalation* Slightly hazardous in case of inhalation (lung irritant).
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 breathing is difficult, give oxygen. If not breathing, give artificial respiration. 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. Get medical attention if symptoms appear.
Skin contact In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Eye contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. 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 applicable.
Fire hazards in presence of various substances Not applicable.
Fire fighting media and instructions Use an extinguishing agent suitable for surrounding fires.
Protective clothing (fire) Not applicable.
Hazardous thermal decomposition 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.
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.

◇ Section 7. Handling and storage

- Handling* Wash thoroughly after handling.
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 occupational exposure limits.

Exposure Limit Values

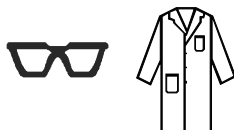
<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
United States	

Personal Protection

Eyes Safety glasses.

Body Lab coat.

Protective Clothing
(Pictograms)



Section 9. Physical and chemical properties

Physical State Liquid. (Clear sparkling liquid.)

Color Colorless.

Odor Not available.

Molecular weight Not applicable.

Taste Not available.

pH (1% Soln/Water) 4.9 to 5.1 [Acidic.]

Boiling/condensation point The lowest known value is 100°C (212°F) (water).

Melting/freezing point May start to solidify at 0°C (32°F) based on data for: water.

Critical temperature The lowest known value is 374.2°C (705.6°F) (water).

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

Vapor pressure The highest known value is 2.3 kPa (17.5 mm Hg) (at 20°C) (water).

Vapor density The highest known value is 0.62 (Air = 1) (water).

Evaporation rate 0.36 (water) compared to (n-BUTYL ACETATE=1)

Viscosity Dynamic: The highest known value is 1 cP (water)

Dispersion properties See solubility in water, methanol, acetone.

Solubility Easily soluble in cold water, hot water, methanol, acetone.
Insoluble in diethyl ether.



Section 10. Stability and reactivity

Stability and Reactivity The product is stable.

Conditions to avoid Sodium azide may react with lead or copper plumbing to form highly explosive metal azides. (Binding Buffer Component 2)

Materials to avoid Not available.

Hazardous polymerization Will not occur.

Hazardous Decomposition Products Not available.

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Section 11. Toxicological information

Toxicity to Animals

water:

ORAL (LD50):

Acute: >90000 mg/kg [Rat].

Sodium Acetate Trihydrate pHix Buffer Grade

LD50: Not available.

LC50: Not available.

Binding Buffer Component 2:

ORAL (LD50):

Acute: 27 mg/kg [Rat]. 27 mg/kg [Mouse]. 23.7 mg/kg

[Birds.].

DERMAL (LD50):

Acute: 20 mg/kg [Rabbit]. 50 mg/kg [Rat].

Chronic Effects on Humans

CARCINOGENIC EFFECTS: Classified None. by NIOSH [Sodium Acetate Trihydrate pHix Buffer Grade].

Other Toxic Effects on Humans

Slightly hazardous in case of eye contact (irritant), of ingestion, of inhalation (lung irritant).

Special Remarks on Toxicity to Animals

Not available.

Special Remarks on Chronic Effects on Humans

Exposure can cause coughing, chest pains, difficulty in breathing. Exposure can cause stomach pains, vomiting and diarrhea. Laboratory experiments have shown mutagenic effects. (Binding Buffer Component 2)

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.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation

No known significant effects or critical hazards.

Ingestion

No known significant effects or critical hazards.

Skin

No known significant effects or critical hazards.



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.

Ecotoxicity data

Ingredient name

Species

Period

Other ecological information

Persistence/degradability

Ingredient name

BOD₅

COD

Ingredient name

Aquatic half-life

Photolysis

Bioaccumulative potential

Ingredient name

LogP_{ow}

BCF

Mobility

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

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Section 13. Disposal considerations

Waste Stream Not available.

Methods of disposal The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

European waste catalogue (EWC) Not available.

Hazardous waste To present knowledge of the supplier, this product is not regarded as hazardous waste as defined by EU Directive 91/689/EC.

Denmark – Carcinogenic waste Not available.

Denmark - Waste card number Not available.

Denmark - Waste group Not available.

Sweden - thermoset plastic waste Not available.

Sweden - Waste group Not available.

Austria - Waste catalogue Not available.

Norway - Waste number Not available.

Norway - Hazardous waste To present knowledge of the supplier, this product is not regarded as hazardous waste as defined by SFT's Directive on special waste.

Switzerland - Waste code Not available.



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: Binding Buffer Component 2; 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: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 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.

State regulations

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Pennsylvania RTK: Binding Buffer Component 2: (environmental hazard, generic environmental hazard)
 Florida: Binding Buffer Component 2
 Minnesota: Binding Buffer Component 2
 Massachusetts RTK: Binding Buffer Component 2
 New Jersey: Binding Buffer Component 2

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

CEPA DSL: Binding Buffer Component 2; water

International Regulations

EINECS Not available.

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

International Lists Australia (NICNAS): Sodium Acetate Trihydrate pHix Buffer Grade

Germany water class: Binding Buffer Component 2; Sodium Acetate Trihydrate pHix Buffer Grade

Philippines (RA6969): Sodium Acetate Trihydrate pHix Buffer Grade

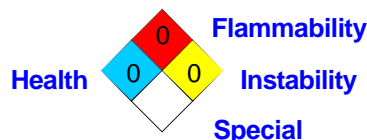
State Regulations Pennsylvania RTK: Binding Buffer Component 2: (environmental hazard, generic environmental hazard)
 Florida: Binding Buffer Component 2
 Minnesota: Binding Buffer Component 2
 Massachusetts RTK: Binding Buffer Component 2
 New Jersey: Binding Buffer Component 2

Section 16. Other information

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

Health	0
Fire hazard	0
Reactivity	0
Personal protection	C

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.

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

Validated by MSDS Administrator on 11/20/2006.

Verified by MSDS Administrator.

Date of previous issue No Previous Validation

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Version 0.02

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