

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

Responsible Name Company2

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

Product name polyubiquitin positive control

Product No. 1859661

Supplier	In USA: Pierce P.O. Box 117 Rockford, IL 61105 USA 815.968.0747 or 1.800.874.3723	In Europe: 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:
202.483.7616

Print Date 3/16/2005
Validation Date 1/27/2005
MSDS# 7244

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 number	%	EC number	Classification
MES pHix Buffer Grade	4432-31-9	1 - 3	224-632-3	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!
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
SKIN, EYES, STOMACH.
Avoid contact with skin and clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Target organs Contains material which causes damage to the following organs: skin, eyes, stomach.

Routes of Entry Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes Irritating to eyes.
Skin Irritating to skin.
Inhalation Irritating to respiratory system.
Ingestion No known significant effects or critical hazards.

Potential chronic health effects

Carcinogenic Effects Data

CARCINOGENIC EFFECTS: Classified None. by NIOSH [Sodium Chloride].
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.

Continued on Next Page

Europe

Classification	Not classified.
<i>Physical/chemical hazards</i>	Not applicable.
<i>Human health hazards</i>	Not applicable.
<i>Environmental hazards</i>	Not applicable.

See Toxicological Information (section 11)

+ Section 4. First Aid Measures

Effects and symptoms

Inhalation Hazardous in case of inhalation.

Ingestion 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 In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

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 May be combustible at high temperature.

Flash Points Not available.

Fire Hazards in Presence of Various Substances

Fire Fighting Media and Instructions Use an extinguishing agent suitable for surrounding fires.

Not available.

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

Hazardous thermal (de)composition products These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...), sulfur oxides (SO₂, SO₃...).

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.

Continued on Next Page

◆ 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.

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. Ensure that eyewash stations and safety showers are proximal to the workstation location.

Exposure Limit Values

Ingredient Name

Occupational Exposure Limits

United States

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.

Color Clear.

Odor Odorless.

Molecular Weight Not applicable.

Taste Not available.

pH (1% Soln/Water) 7.4 [Neutral.]

Dispersion Properties See solubility in water.

Solubility Soluble in cold water, hot water.



Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Conditions to avoid Not available.

Materials to avoid Highly reactive with oxidizing agents.

Hazardous Decomposition Products Not available.

Continued on Next Page



Section 11. Toxicological Information

Toxicity to Animals **MES pHix Buffer Grade**

LD50: Not available.

LC50: Not available.

Sodium Chloride:

ORAL (LD50):

Acute: 3000 mg/kg [Rat]. 4000 mg/kg [Mouse].

DERMAL (LD50):

Acute: 10000 mg/kg [Rabbit].

DUST (LC50):

Acute: 42000 mg/m³ 1 hour(s) [Rat].

Ubiquitin from bovine red blood cells

LD50: Not available.

LC50: Not available.

EDC 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride

LD50: Not available.

LC50: Not available.

Chronic Effects on Humans **CARCINOGENIC EFFECTS: Classified None. by NIOSH [Sodium Chloride].**

Contains material which causes damage to the following organs: skin, eyes, stomach.

Other Toxic Effects on Humans 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 CAUTION: Certain sensitive individuals may develop eczema and/or asthma on exposure to this material. (EDC 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride)

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.

Target organs Contains material which causes damage to the following organs: skin, eyes, stomach.



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

Continued on Next Page

Ingredient name

LogP_{ow}

BCF

- Mobility : Not available.
- Other adverse effects : No known significant effects or critical hazards.



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 Irritating material Target organ effects

U.S. Federal Regulations TSCA 8(b) inventory: EDC 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride Chloride ; MES pHix Buffer Grade; Sodium Chloride
 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
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Chloride: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard
 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.

Continued on Next Page

polyubiquitin positive control

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 No products were found.

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

CEPA DSL: EDC 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride ; MES pHix Buffer Grade; Sodium Chloride

International Regulations

EINECS Not available.

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

International Lists Australia (NICNAS): EDC 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride ; MES pHix Buffer Grade; Sodium Chloride

Germany water class: Sodium Chloride

Japan (METI): EDC 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride ; Sodium Chloride

Japan (MOL): MES pHix Buffer Grade

Korea (TCCL): MES pHix Buffer Grade; Sodium Chloride

Philippines (RA6969): Sodium Chloride

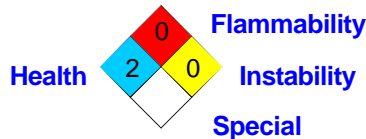
State Regulations No products were found.

Section 16. Other Information

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

Health	*	1
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 Company2 on 1/27/2005.

Verified by Company2.

Date of Previous Issue No Previous Validation

Printed 3/16/2005.

Version 0.01

Notice to Reader

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