

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

Responsible Name Pierce Administration

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

Product name **UltraLink Immobilized Protein G**

Product No. 0053125 0053126 0053127

<b>Supplier</b>	<i>In USA:</i>	<i>In Europe:</i>	<b>Manufacturer</b>	Pierce Biotechnology
	Pierce	Perbio Science		P.O. Box 117
	P.O. Box 117	Industriezone III		Rockford, IL 61105
	Rockford, IL 61105	Industrielaan 27		USA
	USA	9320 Erembodegem-Aalst		815.968.0747 or
	815.968.0747 or	Belgium		1.800.874.3723
	1.800.874.3723	Tel:+32 53 83 44 04		
		Fax:+32 53 83 76 38		

**In Case of Emergency** CALL CHEMTREC:  
800.424.9300  
OUTSIDE US:  
202.483.7616

Print Date 11/10/2002  
Validation Date **11/6/2002**  
MSDS# 3078

**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

<u>Ingredient Name</u>	<u>CAS No.</u>	<u>%</u>	<u>EC Number</u>	<u>Symbol</u>	<u>R-Phrases</u>
1) UltraLink Biosupport Medium		0.1-1	200-662-2	F, C	R11, R34
2) Azlactone Acrylamide Copolymer		45-65	Not available.	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: BLOOD, KIDNEYS, LUNGS, LIVER, MUCOUS MEMBRANES, RESPIRATORY TRACT, SKIN, EYES, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.  
MAY CAUSE EYE IRRITATION.  
Avoid contact with eyes. Wash thoroughly after handling.

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

**Potential Acute Health Effects** Hazardous in case of eye contact (irritant). Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

**Carcinogenic Effects Data** **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [Triton X-100]. Classified None. by NIOSH [UltraLink Biosupport Medium]. Classified A4 (Not classifiable for human or animal.) by ACGIH [UltraLink Biosupport Medium].

**MUTAGENIC EFFECTS:** Not available.

**TERATOGENIC EFFECTS:** Classified None. for human [UltraLink Biosupport Medium].

**Medical Conditions Aggravated by Overexposure:** Repeated or prolonged exposure is not known to aggravate medical condition.

**Overexposure /Signs/Symptoms** Not available.

**Europe**

**Classification** R36

**Physical/chemical hazards** Not applicable.

**Human health hazards** Irritating to eyes.

**Environmental hazards** Not applicable.

See Toxicological Information (section 11)

**Continued on Next Page**

## Section 4. First Aid Measures

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

**Effects and symptoms**

*Inhalation* Slightly hazardous in case of inhalation.

*Ingestion* Slightly hazardous in case of ingestion.

*Skin Contact* Sensitization of the product: Not available.

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

*Eye Contact* 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.

*Eye Contact* Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention.

*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* Flammable in presence of open flames and sparks, of heat.  
Non-flammable in presence of shocks, of organic materials, of metals, of acids, of alkalis.

*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.

*Special Remarks on Fire Hazards* HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.  
Vapors may form explosive mixtures with air.  
Vapors may travel to source of ignition and flash back.  
Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).  
Vapor explosion hazard indoors, outdoors or in sewers.  
Some may polymerize (P) explosively when heated or involved in a fire.  
Runoff to sewer may create fire or explosion hazard.  
Containers may explode when heated.  
Many liquids are lighter than water.  
(UltraLink Biosupport Medium)

*Hazardous thermal (de)composition products* Not available.

## Section 6. Accidental Release Measures

*Personal precautions* Splash goggles. Lab coat.

*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* Absorb with an inert material and put the spilled material in an appropriate waste disposal.

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## Section 7. Handling and Storage

**Handling** Avoid contact with eyes. 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

#### Ingredient Name

#### Occupational Exposure Limits

#### United States

1) Azlactone Acrylamide Copolymer

Not available.

#### Sweden

1) UltraLink Biosupport Medium  
2) Azlactone Acrylamide Copolymer

TWA: 250 CEIL: 500 (ppm) from AFS [Sweden] [1996] Inhalation  
Not available.

#### Denmark

1) UltraLink Biosupport Medium  
2) Azlactone Acrylamide Copolymer

TWA: 250 (ppm) from Arbejdstilsynet [Denmark] [1996] Inhalation  
Not available.

#### Norway

1) UltraLink Biosupport Medium  
2) Azlactone Acrylamide Copolymer

TWA: 125 STEL: 2400 (ppm) from Arbejdstilsynet [Norway] [1996] Inhalation  
Not available.

#### France

1) UltraLink Biosupport Medium  
2) Azlactone Acrylamide Copolymer

TWA: 750 (ppm) from INRS [France] [1999] Inhalation  
Not available.

#### Netherlands

1) UltraLink Biosupport Medium  
2) Azlactone Acrylamide Copolymer

TWA: 750 (ppm) from Arbeidsinspectie [Netherlands] [2000] Inhalation  
Not available.

#### Germany

1) UltraLink Biosupport Medium  
2) Azlactone Acrylamide Copolymer

TWA: 500 STEL: 1000 CEIL: 2000 (ppm) from BAuA [Germany] [1999] Inhalation  
Not available.

### Personal Protection

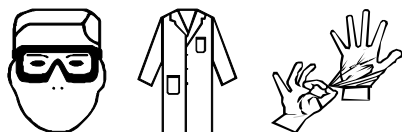
**Eyes** Splash goggles.

**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

<i>Physical State and Appearance</i>	Liquid. (Suspension.)	<i>Odor</i>	Not available.
<i>Molecular Weight</i>	Not applicable.	<i>Taste</i>	Not available.
<i>pH (1% Soln/Water)</i>	Neutral.	<i>Color</i>	White. Off-white.
<i>Boiling/Condensation Point</i>	The lowest known value is 100°C (212°F) (Deionized Water). Weighted average: 100°C (212°F)		
<i>Melting/Freezing Point</i>	May start to solidify at 0°C (32°F) based on data for: Water. Weighted average: -0.1°C (31.8°F)		
<i>Specific Gravity</i>	Weighted average: 1 (Water = 1)		
<i>Vapor Pressure</i>	The highest known value is 2.3 kPa (@ 20°C) (Deionized Water). Weighted average: 2.3 kPa (@ 20°C)		
<i>Vapor Density</i>	The highest known value is 0.62 (Air = 1) (Deionized Water). Weighted average: 0.62 (Air = 1)		
<i>Volatility</i>	100% (v/v). (UltraLink Biosupport Medium.)		
<i>Evaporation Rate</i>	0.36 (Water) compared to Butyl acetate.		
<i>VOC</i>	50 (%)		
<i>LogK<sub>ow</sub></i>	The product is more soluble in oil.		
<i>Dispersion Properties</i>	Is not dispersed in cold water, hot water, methanol, diethyl ether, n-octanol. See solubility in methanol, diethyl ether, n-octanol.		
<i>Solubility</i>	Easily soluble in methanol, diethyl ether. Partially soluble in n-octanol. Insoluble in cold water, hot water.		



## Section 10. Stability and Reactivity

<i>Stability and Reactivity</i>	The product is stable.
<i>Conditions to avoid</i>	Reacts violently with water especially when water is added to the product. Heating may cause an explosion. Keep away from heat (Sodium Azide)
<i>Materials to avoid</i>	Not available.
<i>Hazardous Polymerization</i>	Will not occur.
<i>Hazardous Decomposition Products</i>	Not available.



## Section 11. Toxicological Information

<i>Toxicity to Animals</i>	LD50: Not available. LC50: Not available.
<i>Chronic Effects on Humans</i>	<b>CARCINOGENIC EFFECTS:</b> Classified None. by NIOSH [Triton X-100]. Classified None. by NIOSH [UltraLink Biosupport Medium]. Classified A4 (Not classifiable for human or animal.) by ACGIH [UltraLink Biosupport Medium]. <b>TERATOGENIC EFFECTS:</b> Classified None. for human [UltraLink Biosupport Medium]. Contains material which causes damage to the following organs: the nervous system, the reproductive system.
<i>Other Toxic Effects on Humans</i>	Hazardous in case of eye contact (irritant). Slightly hazardous in case of ingestion, of inhalation.
<i>Special Remarks on Toxicity to Animals</i>	Not available.
<i>Special Remarks on Chronic Effects on Humans</i>	Not available.
<i>Special Remarks on Other Toxic Effects on Humans</i>	To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated. (Azlactone Acrylamide Copolymer)

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## Section 12. Ecological Information

<b>Mobility</b>	Not available.
<b>Persistence/degradability</b>	Not available.
<b>Bioaccumulative potential</b>	Not available.
<b>Ecotoxicity</b>	Not available.
<b>Germany water class</b>	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)

R36- Irritating to eyes.

S2- Keep out of the reach of children.

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



**Irritant**

**HCS Classification** Target organ effects.

### U.S. Federal Regulations

TSCA 4(a) final test rules: UltraLink Biosupport Medium  
 TSCA 8(a) PAIR: Triton X-100  
 TSCA 8(b) inventory: Deionized Water; Sodium Azide; Triton X-100; Water; UltraLink Biosupport Medium  
 TSCA 8(d) H and S data reporting: Sodium Azide; UltraLink Biosupport Medium  
 TSCA 12(b) one time export: UltraLink Biosupport Medium  
 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: Sodium Azide; Triton X-100; UltraLink Biosupport Medium  
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Azide: immediate health hazard; Triton X-100: immediate health hazard, delayed health hazard; UltraLink Biosupport Medium: fire, immediate health hazard, delayed 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.

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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: Deionized Water; Sodium Azide; Triton X-100; Water; UltraLink Biosupport Medium

CEPA NDSL: Sodium Azide

*International Regulations*

*EINECS* Not available.

*DSCL (EEC)* R36- Irritating to eyes.

*International Lists* Australia (NICNAS): Deionized Water; Sodium Azide; Triton X-100; Water; UltraLink Biosupport Medium

Germany water class: Sodium Azide; UltraLink Biosupport Medium

Korea (TCCL): Deionized Water; Sodium Azide; Triton X-100; Water; UltraLink Biosupport Medium

Philippines (RA6969): Deionized Water; Sodium Azide; Triton X-100; Water; UltraLink Biosupport Medium

*State Regulations* Pennsylvania RTK: Sodium Azide: (environmental hazard, generic environmental hazard); UltraLink Biosupport Medium: (environmental hazard, generic environmental hazard)  
 Florida: Sodium Azide  
 Minnesota: Sodium Azide  
 Massachusetts RTK: Sodium Azide; UltraLink Biosupport Medium  
 Massachusetts spill list: UltraLink Biosupport Medium  
 New Jersey: Sodium Azide; UltraLink Biosupport Medium  
 California prop. 65: **No products were found.**

**Section 16. Other Information**

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

Health	*	1
Fire Hazard		2
Reactivity		0
Personal Protection		j

**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* Causes burns.  
*referenced under headings 2 and 3:* 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 11/6/2002.

Verified by Pierce Administration.

Date of Previous Issue No Previous Validation

Printed 11/10/2002.

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.*