

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

Responsible Name Pierce Administration

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

Product name **Coomasie Plus™ Protein Assay Reagent**

Product No. 0023238 1900245

Supplier	<i>In USA:</i>	<i>In Europe:</i>	Manufacturer	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 9/2/2003
Validation Date 9/2/2003
MSDS# 3596

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) Coomasie Plus Protein Assay Reagent Ingredient Name #1		3-5	xxx-xxx-x	F, T	R11, R23/24/25, R39/23/24/25
2) Acid		7-10	xxx-xxx-x	Xn	R22, R37/38, R41
3) Coomasie Plus Protein Assay Reagent Ingredient Name #3		0.1-1	xxx-xxx-x	Xn	R20/21/22, R36/37/38
4) Coomasie Plus Protein Assay Reagent Ingredient Name #2		0.1-1	Not available.	--	Not controlled under dsd (Europe).

 **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 DANGER!
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
LUNGS, GASTROINTESTINAL TRACT, RESPIRATORY TRACT, SKIN, EYES,
CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
MAY BE HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED.
Avoid prolonged contact with eyes, skin, and clothing. Do not ingest. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

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

Potential Acute Health Effects Slightly hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant, corrosive), of ingestion, of inhalation (lung irritant, lung corrosive). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath.

Carcinogenic Effects Data **CARCINOGENIC EFFECTS:** Classified 4 (No evidence.) by NTP, None. by OSHA, None. by NIOSH [Methanol]. Classified None. by NIOSH [Coomassie Plus-200 Protein Assay Reagent]. Classified 4 (No evidence.) by NTP, None. by OSHA [Coomassie Plus-200 Protein Assay Reagent].

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Classified None. for human [Coomassie Plus-200 Protein Assay Reagent].

Medical Conditions Aggravated by Overexposure: Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Overexposure /Signs/Symptoms Not available.

Europe

Classification	R20/21/22, R40/20/21/22
Physical/chemical hazards	Not applicable.
Human health hazards	Harmful by inhalation, in contact with skin and if swallowed. Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.
Environmental hazards	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 (lung irritant, lung corrosive). Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation.
<i>Ingestion</i>	May be fatal if swallowed. May cause burns to mouth, throat, and stomach.
<i>Skin Contact</i>	Sensitization of the product: Not available. Slightly hazardous in case of skin contact (corrosive, irritant). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
<i>Eye Contact</i>	Slightly hazardous in case of eye contact (irritant, corrosive).
<i>Aggravating conditions</i>	Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

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. Cover the irritated skin with an emollient. 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. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention if irritation occurs.
<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.

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Section 6. Accidental Release Measures

Personal precautions Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Environmental Precautions and Clean-up Methods Corrosive liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. 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.

Section 7. Handling and Storage

Handling Avoid prolonged contact with eyes, skin, and clothing. Do not ingest. Avoid breathing vapors or spray mists. Keep container closed. Use only with adequate ventilation. 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 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) Acid TWA: 1 STEL: 3 (mg/m³) from OSHA (PEL) [United States] [1989] Inhalation

Sweden

1) Coomasie Plus Protein Assay Reagent TWA: 200 STEL: 350 CEIL: 250 (ppm) from AFS [Sweden] [1996] SKIN

Ingredient Name #1

2) Acid Not available.

3) Coomasie Plus Protein Assay Reagent Not available.

Ingredient Name #3

4) Coomasie Plus Protein Assay Reagent Not available.

Ingredient Name #2

Denmark

1) Coomasie Plus Protein Assay Reagent TWA: 200 (ppm) from Arbejdstilsynet [Denmark] [1996] SKIN

Ingredient Name #1

2) Acid Not available.

3) Coomasie Plus Protein Assay Reagent Not available.

Ingredient Name #3

4) Coomasie Plus Protein Assay Reagent Not available.

Ingredient Name #2

Norway

1) Coomasie Plus Protein Assay Reagent TWA: 100 STEL: 325 (ppm) from Arbejdstilsynet [Norway] [1996] SKIN

Ingredient Name #1

2) Acid Not available.

3) Coomasie Plus Protein Assay Reagent Not available.

Ingredient Name #3

4) Coomasie Plus Protein Assay Reagent Not available.

Ingredient Name #2

France

1) Coomasie Plus Protein Assay Reagent TWA: 200 STEL: 1300 (ppm) from INRS [France] [1999] Inhalation

Ingredient Name #1

2) Acid Not available.

3) Coomasie Plus Protein Assay Reagent Not available.

Ingredient Name #3

4) Coomasie Plus Protein Assay Reagent Not available.

Ingredient Name #2

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Netherlands

1) Coomassie Plus Protein Assay Reagent Ingredient Name #1	TWA: 200 (ppm) from Arbeidsinspectie [Netherlands] [2000] Inhalation
2) Acid	Not available.
3) Coomassie Plus Protein Assay Reagent Ingredient Name #3	Not available.
4) Coomassie Plus Protein Assay Reagent Ingredient Name #2	Not available.

Germany

1) Coomassie Plus Protein Assay Reagent Ingredient Name #1	TWA: 200 STEL: 250 CEIL: 800 (ppm) from BAuA [Germany] [1999] SKIN
2) Acid	Not available.
3) Coomassie Plus Protein Assay Reagent Ingredient Name #3	Not available.
4) Coomassie Plus Protein Assay Reagent Ingredient Name #2	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.**Feet** Boots.Protective Clothing
(Pictograms)**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** Not available.**Boiling/Condensation Point** The lowest known value is 64.55°C (148.2°F) (Methanol). Weighted average: 103.92°C (219.1°F)**Melting/Freezing Point** May start to solidify at 42.27°C (108.1°F) based on data for: Acid. Weighted average: 0.09°C (32.2°F)**Specific Gravity** Weighted average: 1.03 (Water = 1)**Vapor Pressure** The highest known value is 12.9 kPa (@ 20°C) (Methanol). Weighted average: 2.49 kPa (@ 20°C)**Vapor Density** The highest known value is 3.4 (Air = 1) (Acid). Weighted average: 0.89 (Air = 1)**Odor Threshold** The highest known value is 100 ppm (Methanol)**Evaporation Rate** 0.36 (Milli-Q Water) compared to Butyl acetate.**Ionicity (in Water)** Non-ionic.**Dispersion Properties** See solubility in water.**Solubility** Easily 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** Reactive with organic materials.
Slightly reactive to 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): 1530 mg/kg [Rat]. (Acid).
Acute dermal toxicity (LD50): 2470 mg/kg [Rabbit]. (Acid).
- Chronic Effects on Humans** **CARCINOGENIC EFFECTS:** Classified 4 (No evidence.) by NTP, None. by OSHA, None. by NIOSH [Methanol].
Classified None. by NIOSH [Coomassie Plus-200 Protein Assay Reagent]. Classified 4 (No evidence.) by NTP, None. by OSHA [Coomassie Plus-200 Protein Assay Reagent].
TERATOGENIC EFFECTS: Classified None. for human [Coomassie Plus-200 Protein Assay Reagent].
- 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** May be Harmful by inhalation, ingestion or skin absorption. May cause irritation. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. (Coomassie Blue G-250)
- Special Remarks on Other Toxic Effects on Humans** May be Harmful by inhalation, ingestion or skin absorption. May cause irritation. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. (Coomassie Blue G-250)



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)**

R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
 R40/20/21/22- Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

S36/37- Wear suitable protective clothing and gloves.


Harmful
HCS Classification
**Target organ effects.
Corrosive material**

U.S. Federal Regulations TSCA 8(b) inventory: Coomassie Blue G-250; Coomassie Plus Protein Assay Reagent Ingredient Name #1; Water; Acid; Coomassie Plus Protein Assay Reagent Ingredient Name #3; Coomassie Plus Protein Assay Reagent Ingredient Name #2; Milli-Q Water
 TSCA 8(d) H and S data reporting: Acid; Coomassie Plus Protein Assay Reagent Ingredient Name #3
 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: Coomassie Plus Protein Assay Reagent Ingredient Name #1; Acid; Coomassie Plus Protein Assay Reagent Ingredient Name #3
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Coomassie Plus Protein Assay Reagent Ingredient Name #1: fire, immediate health hazard, delayed health hazard; Acid: immediate health hazard; Coomassie Plus Protein Assay Reagent Ingredient Name #3: immediate health hazard, delayed health hazard
 SARA 313 toxic chemical notification and release reporting: Methanol 3.5%; Acid 8.5%
 Clean Water Act (CWA) 307: No products were found.
 Clean Water Act (CWA) 311: Acid
 Clean air act (CAA) 112 accidental release prevention: Coomassie Plus Protein Assay Reagent Ingredient Name #1
 Clean air act (CAA) 112 regulated flammable substances: Coomassie Plus Protein Assay Reagent Ingredient Name #1
 Clean air act (CAA) 112 regulated toxic substances: No products were found.

WHMIS (Canada) CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
 CLASS E: Corrosive liquid.

CEPA DSL: Coomassie Blue G-250; Coomassie Plus Protein Assay Reagent Ingredient Name #1; Water; Acid; Coomassie Plus Protein Assay Reagent Ingredient Name #3; Coomassie Plus Protein Assay Reagent Ingredient Name #2; Milli-Q Water

International Regulations

EINECS Not available.

DSCL (EEC) R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
 R40/20/21/22- Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

International Lists Australia (NICNAS): Coomassie Blue G-250; Coomassie Plus Protein Assay Reagent Ingredient Name #1; Water; Acid; Coomassie Plus Protein Assay Reagent Ingredient Name #3; Coomassie Plus Protein Assay Reagent Ingredient Name #2; Milli-Q Water

Germany water class: Coomassie Plus Protein Assay Reagent Ingredient Name #1; Coomassie Plus Protein Assay Reagent Ingredient Name #3; Coomassie Plus Protein Assay Reagent Ingredient Name #2

Korea (TCCL): Coomassie Blue G-250; Coomassie Plus Protein Assay Reagent Ingredient Name #1; Water; Acid; Coomassie Plus Protein Assay Reagent Ingredient Name #3; Coomassie Plus Protein Assay Reagent Ingredient Name #2; Milli-Q Water

Philippines (RA6969): Coomassie Blue G-250; Coomassie Plus Protein Assay Reagent Ingredient Name #1; Water; Acid; Coomassie Plus Protein Assay Reagent Ingredient Name #3; Coomassie Plus Protein Assay Reagent Ingredient Name #2; Milli-Q Water

State Regulations Pennsylvania RTK: Methanol: (environmental hazard, generic environmental hazard); Acid: (environmental hazard)

Florida: Methanol
 Massachusetts RTK: Methanol; Acid
 New Jersey: Methanol; Acid

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		

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:
 Harmful if ingested.
 Irritating to respiratory system and skin.
 Risk of serious damage to eyes.
 Harmful by inhalation, in contact with skin and if swallowed.
 Irritating to eyes, respiratory system and skin.
 Not applicable.

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

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Version

1.01

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.