

MATERIAL SAFETY DATA SHEET

DULBECCO'S PHOSPHATE-BUFFERED SALINE (D-PBS), LIQUID  
 INVITROGEN CORPORATION  
 MSDS ID: 12398

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 Revised 4/16/02  
 Replaces 2/14/02  
 Printed 1/09/03

1. PRODUCT AND COMPANY INFORMATION

INVITROGEN CORPORATION  
 1600 FARADAY AVE.  
 CARLSBAD, CA 92008  
 760/603-7200

GIBCO PRODUCTS  
 INVITROGEN CORPORATION  
 3175 STALEY ROAD P.O. BOX 68  
 GRAND ISLAND, NY 14072  
 716/774-6700

INVITROGEN CORPORATION  
 3 FOUNTAIN DR.  
 INCHINNAN BUSINESS PARK  
 PAISLEY, PA4 9RF  
 SCOTLAND  
 44-141 814-6100

INVITROGEN CORPORATION  
 P.O. BOX 12-502  
 PENROSE  
 AUCKLAND 1135  
 NEW ZEALAND  
 64-9-579-3024

INVITROGEN CORPORATION  
 2270 INDUSTRIAL ST.  
 BURLINGTON, ONT  
 CANADA L7P 1A1  
 905/335-2255

EMERGENCY NUMBER (SPILLS, EXPOSURES): 301/431-8585 (24 HOUR)  
 800/451-8346 (24 HOUR)  
 NON-EMERGENCY INFORMATION: 800/955-6288

Product Name:  
 DULBECCO'S PHOSPHATE-BUFFERED SALINE (D-PBS), LIQUID

NOTE: If this product is a kit or is supplied with more than one material,  
 please refer to the MSDS for each component for hazard information.

Product Use:  
 These products are for laboratory research use only and are not intended for  
 human or animal diagnostics, therapeutic, or other clinical uses.

Synonyms:  
 Not available.

2. COMPOSITION, INFORMATION ON INGREDIENTS

The following list shows components of this product classified as hazardous  
 based on physical properties and health effects:

| Component               | CAS No. | Percent |
|-------------------------|---------|---------|
| No hazardous components |         |         |

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**3. HAZARDS IDENTIFICATION**

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\*\*\*\*\* EMERGENCY OVERVIEW \*\*\*\*\*  
Occupational exposure presents little or no health hazard.  
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Potential Health Effects:

Eye:

May cause irritation of the eye.

Skin:

Contact may irritate/inflame the skin.

Inhalation:

No toxicity expected from inhalation.

Ingestion:

May cause nausea or vomiting.

Chronic:

No data on cancer.

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**4. FIRST AID MEASURES**

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Eye:

Flush with water in an eyewash for at least 15 minutes, holding eyelids open. Remove contact lenses, clean before re-use. Obtain medical attention if symptoms develop (redness, itching, etc.).

Skin:

Wash with plenty of soap and water. Obtain medical attention if symptoms develop (redness, itching, etc.). Remove contaminated clothes, wash before re-use.

Inhalation:

Remove person to fresh air. Obtain medical attention unless effects are mild and temporary.

Ingestion:

Give plenty of water, if conscious. If vomiting occurs naturally, wash mouth out. Be prepared to induce vomiting upon a physician's advice. Obtain medical attention if symptoms develop.

Note To Physician:

Treat symptomatically.

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5. FIRE FIGHTING MEASURES

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Flashpoint Deg C:  
Upper Flammable Limit %:  
Lower Flammable Limit %:  
Autoignition Temperature Deg C:

Not available.  
Not available.  
Not available.  
Not available.

Extinguishing Media:  
Use means appropriate for surrounding materials.

Firefighting Techniques/Equipment:  
Standard turnout gear ("bunker gear"). Positive-pressure self-contained breathing apparatus.

Hazardous Combustion Products:  
Includes carbon dioxide, carbon monoxide, dense smoke.

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6. ACCIDENTAL RELEASE MEASURES

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Accidental releases may be subject to special reporting requirements and other regulatory mandates. Refer to Section 8 for personal protection equipment recommendations.

Spill Cleanup:  
Absorb spill. Common absorbent materials should be effective. Deposit in appropriate containers for removal and disposal.

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7. HANDLING AND STORAGE

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Storage of some materials is regulated by federal, state, and/or local laws.

Storage Pressure:  
Ambient

Handling Procedures:  
Keep closed or covered when not in use.

Storage Procedures:  
Suitable for most general chemical storage areas.

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**8. EXPOSURE CONTROLS, PERSONAL PROTECTION**

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## Exposure Limits:

| Component               | OSHA PEL<br>(ppm) | AGCIH TWA<br>(ppm) |
|-------------------------|-------------------|--------------------|
| No hazardous components |                   |                    |

## Engineering Controls:

Area ventilation is generally adequate.

## Personal Protective Equipment:

## Eye:

Safety glasses should be the minimum eye protection.

## Skin:

Gloves should be used as minimum hand protection.

## Respiratory:

No respiratory protection will be needed under normal industrial operating conditions.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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|                                |                              |
|--------------------------------|------------------------------|
| Appearance/physical state:     | Liquid solution / suspension |
| Odor:                          | No odor.                     |
| Boiling Point (C):             | Not established.             |
| Melting Point (C):             | Not established.             |
| Solubility in water:           | Not established.             |
| pH:                            | Not established.             |
| Vapor Pressure:                | Not established.             |
| Vapor Density:                 | Not established.             |
| Specific Gravity/Density:      | Not established.             |
| Octanol/water Partition Coeff: | Not established.             |
| Volatiles:                     | Not established.             |
| Evaporation Rate:              | Not established.             |
| Viscosity:                     | Not established.             |

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**10. STABILITY AND REACTIVITY**

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## Stability:

Stable under ordinary conditions of use and storage.

## Conditions to Avoid:

Strong oxidizers.

## Hazardous Decomposition Products:

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10. STABILITY AND REACTIVITY (CONT.)

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None known.

Hazardous Polymerization:  
Not expected to occur.

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11. TOXICOLOGICAL INFORMATION

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Acute Toxicity:

Dermal/Skin:  
Not determined.

Inhalation/Respiratory:  
Not determined.

Oral/Ingestion:  
Not determined.

Target Organs: No data found.

Carcinogenicity:

NTP:  
Not tested.

IARC:  
Not listed.

OSHA:  
Not regulated.

Other Toxicological Information

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12. Ecological Information

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Ecotoxicological Information: No ecological information available.

Environmental Fate (Degradation, Transformation, and Persistence):  
Bioconcentration is not expected to occur.

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13. DISPOSAL CONSIDERATIONS

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Regulatory Information:  
Not applicable.

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13. DISPOSAL CONSIDERATIONS (CONT.)

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Disposal Method:  
Clean up and dispose of waste in accordance with all federal, state, and local environmental regulations.

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14. TRANSPORT INFORMATION

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Proper Shipping Name: Not Determined.  
Hazard Class:  
Subsidiary Hazards:  
ID Number:  
Packing Group:

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15. REGULATORY INFORMATION

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UNITED STATES:

TSCA:  
This product is solely for research and development purposes only and may not be used, processed or distributed for a commercial purpose. It may only be handled by technically qualified individuals.

Prop 65 Listed Chemicals: PROP 65 PERCENT  
No Prop 65 Chemicals.

No 313 Chemicals

CANADA:

DSL/NDSL:  
Not determined.

COMPONENT WHMIS Classification  
No hazardous components

EUROPEAN UNION:

PRODUCT RISK PHRASES: None assigned.  
PRODUCT SAFETY PHRASES: None assigned.  
PRODUCT CLASSIFICATION: Not classified.

EINECS

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15. REGULATORY INFORMATION (CONT.)

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| Component               | Number |
|-------------------------|--------|
| No hazardous components |        |

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16. OTHER INFORMATION

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HMIS Rating 0-4:

FIRE: Not determined.  
HEALTH: Not determined.  
REACTIVITY: Not determined.

Abbreviations

N/A - Data is not applicable or not available  
SARA - Superfund and Reauthorization Act  
HMIS - Hazard Material Information System  
WHMIS - Workplace Hazard Materials Information System  
NTP - National Toxicology Program  
OSHA - Occupational Health and Safety Administration  
IARC - International Agency for Research on Cancer  
PROP 65 - California Safe Drinking Water and  
Toxic Enforcement Act of 1986  
EINECS - European Inventory of Existing Commercial  
Chemical Substances

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since Invitrogen Corporation cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.