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MATERIAL SAFETY DATA SHEET

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PCDNA6.2/CGB/GW/D-TOPO  
INVITROGEN CORPORATION  
MSDS ID: 461017

Page 1 of 8  
Revised 6/19/03  
Replaces (None)  
Printed 7/14/03

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1. PRODUCT AND COMPANY INFORMATION

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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: PCDNA6.2/CGB/GW/D-TOPO  
Stock Number: 461017

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.

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2. COMPOSITION, INFORMATION ON INGREDIENTS

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

Component	CAS No.	Percent
GLYCEROL	56-81-5	30 - 60

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**3. HAZARDS IDENTIFICATION**

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## \*\*\*\*\* EMERGENCY OVERVIEW \*\*\*\*\*

Caution!

Irritant.

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Potential Health Effects:

Eye:

Can cause minor irritation, tearing and reddening.

Skin:

Can cause minor skin irritation, defatting, and dermatitis.

Inhalation:

Can cause minor respiratory irritation, dizziness, weakness, fatigue, nausea, and headache.

No toxicity expected from inhalation.

Ingestion:

Mildly irritating to mouth, throat, and stomach. Can cause abdominal discomfort.

Chronic:

No data on cancer.

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**4. FIRST AID MEASURES**

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Eye:

Use an eye wash to remove a chemical from your eye regardless of the level of hazard. Flush the affected eye for at least twenty minutes. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Seek medical advice after flushing.

Skin:

Wash with soap and water. Get medical attention if irritation develops or persists.

Inhalation:

Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen.

Ingestion:

Minimal risk of harm if swallowed. Do not induce vomiting. Seek medical attention immediately. Provide medical care provider with this MSDS.

Note To Physician:

Treat symptomatically.

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5. FIRE FIGHTING MEASURES

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Flashpoint Deg C: 199  
Upper Flammable Limit %: Not available.  
Lower Flammable Limit %: 1.1  
Autoignition Temperature Deg C: 370

**Extinguishing Media:**

Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire. Do Not direct a stream of water into the hot burning liquid. Use water spray/fog for cooling.

**Firefighting Techniques/Equipment:**

Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products.

**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:**

No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section VIII of this MSDS .  
Ventilate the contaminated area.  
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section VIII at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

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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:  
Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area.  
Keep closed or covered when not in use.

Storage Procedures:  
Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed.  
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 (ppm)	AGCIH TWA (ppm)
GLYCEROL	15	10 MG/M3

Engineering Controls:  
No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Personal Protective Equipment:

Eye:  
An eye wash station must be available where this product is used.  
Wear chemical goggles.

Skin:  
Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene and wear a barrier cream and/or impervious surgical style gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.  
Have a safety shower available.

Respiratory:  
NIOSH approved air purifying respirator with dust/mist filter.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance/physical state: Liquid solution / suspension  
Odor: No odor.  
Not established.  
Not established.  
Not established.  
Not established.  
Not established.  
Not established.  
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 normal conditions.

Conditions to Avoid:  
Strong oxidizing agents. Temperatures above flash point in combination with sparks, open flames, or other sources of ignition.

Hazardous Decomposition Products:  
Carbon monoxide. Carbon dioxide.

Hazardous Polymerization:  
Hazardous polymerization will not occur.

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**11. TOXICOLOGICAL INFORMATION**

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Acute Toxicity:

Dermal/Skin:  
Not determined.

Inhalation/Respiratory:  
Not determined.

Oral/Ingestion:  
Glycerol: 12600 MG/KG

Target Organs: Kidneys.

Carcinogenicity:

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11. TOXICOLOGICAL INFORMATION (CONT.)

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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.  
Biodegrades quickly.

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13. DISPOSAL CONSIDERATIONS

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Regulatory Information:  
Not applicable.

Disposal Method:  
Clean up and dispose of waste in accordance with all federal, state, and local environmental regulations.  
Dispose of by incineration following Federal, State, Local, or Provincial regulations.

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14. TRANSPORT INFORMATION

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Proper Shipping Name: Not Determined.  
Subsidiary Hazards:

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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

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15. REGULATORY INFORMATION (CONT.)

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
GLYCEROL	D2B

EUROPEAN UNION:

PRODUCT RISK PHRASES: None assigned.  
 PRODUCT SAFETY PHRASES: Not applicable.  
 PRODUCT CLASSIFICATION: Not classified as hazardous

Component	EINECS Number
GLYCEROL	200-289-5

16. OTHER INFORMATION

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

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16. OTHER INFORMATION (CONT.)

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## 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.