1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code: 10978021
Product name: DNAZOL REAGENT

Company/Undertaking Identification

INVITROGEN CORPORATION
5791 VAN ALLEN WAY
PO BOX 6482
CARLSBAD, CA 92008
760-603-7200

INVITROGEN CORPORATION
5250 MAINWAY DRIVE
BURLINGTON, ONT
CANADA L7L 6A4
800-263-6236

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

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous/Non-hazardous Components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiocyanic acid, compound with guanidine (1:1)</td>
<td>593-84-0</td>
<td>30-60</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview
Harmful if swallowed

Form
Liquid
3. HAZARDS IDENTIFICATION

Principle Routes of Exposure/ Potential Health effects

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Not to be used for eyes. May cause eye irritation with susceptible persons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Components of the product may be absorbed into the body through the skin. Irritating to skin and mucous membranes.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May cause irritation of respiratory tract.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

Specific effects

- **Carcinogenic effects**: No information available
- **Mutagenic effects**: No information available
- **Reproductive toxicity**: No information available
- **Sensitization**: No information available

Target Organ Effects

No information available

HMIS

<table>
<thead>
<tr>
<th>Health</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Skin contact

Wash off immediately with plenty of water

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes

Ingestion

Never give anything by mouth to an unconscious person

Inhalation

Move to fresh air

Notes to physician

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water spray. Carbon dioxide (CO2). Foam. The product is not flammable.

Special protective equipment for firefighters

Wear self-contained breathing apparatus and protective suit

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment

Methods for cleaning up

Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes.

Storage

Keep in properly labelled containers

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Exposure limits
### Engineering measures
Ensure adequate ventilation, especially in confined areas.

### Personal protective equipment
- **Respiratory protection**: In case of insufficient ventilation wear suitable respiratory equipment.
- **Hand protection**: Protective gloves.
- **Eye protection**: Safety glasses with side-shields.
- **Skin and body protection**: Lightweight protective clothing.
- **Hygiene measures**: Handle in accordance with good industrial hygiene and safety practice.
- **Environmental exposure controls**: Prevent product from entering drains.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### General Information
- **Form**: Liquid

### Important Health Safety and Environmental Information

<table>
<thead>
<tr>
<th>Property</th>
<th>°C</th>
<th>°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point/range</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>soluble</td>
<td></td>
</tr>
</tbody>
</table>

## 10. STABILITY AND REACTIVITY

### Stability
Stable under normal conditions.

### Materials to avoid
Acids.

### Hazardous decomposition products
Hydrogen cyanide (hydrocyanic acid). Contact with acids liberates very toxic gas.

### Polymerization
Hazardous polymerisation does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral,rat/mouse)</th>
<th>LD50 (dermal,rat/rabbit)</th>
<th>LC50 (inhalation,rat/mouse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiocyanic acid, compound with guanidine (1:1)</td>
<td>593 mg/kg</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### Principle Routes of Exposure/
### Potential Health effects

#### Eyes
Not to be used for eyes. May cause eye irritation with susceptible persons.

#### Skin
Components of the product may be absorbed into the body through the skin. Irritating to skin and mucous membranes.

#### Inhalation
May cause irritation of respiratory tract.

#### Ingestion
Harmful if swallowed.

### Specific effects
- **Carcinogenic effects**: No information available
<table>
<thead>
<tr>
<th>Mutagenic effects</th>
<th>No information available</th>
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</thead>
<tbody>
<tr>
<td>Reproductive toxicity</td>
<td>No information available</td>
</tr>
<tr>
<td>Sensitization</td>
<td>No information available</td>
</tr>
</tbody>
</table>

**Target Organ Effects**
No information available

### 12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Ecotoxicity effects</th>
<th>No information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>No information available.</td>
</tr>
<tr>
<td>Biodegradation</td>
<td>No information available.</td>
</tr>
<tr>
<td>Bioaccumulation</td>
<td>No information available</td>
</tr>
</tbody>
</table>

### 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations

### 14. TRANSPORT INFORMATION

**IATA**
- **Proper shipping name**: Not classified as dangerous in the meaning of transport regulations
- **Hazard Class**: No information available
- **Subsidiary Class**: No information available
- **Packing group**: No information available
- **UN-No**: No information available

### 15. REGULATORY INFORMATION

#### International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>PICCS</th>
<th>ENCS</th>
<th>DSL</th>
<th>NDSL</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiocyanic acid, compound with guanidine (1:1)</td>
<td>Listed</td>
<td>Listed</td>
<td>-</td>
<td>Listed</td>
<td>-</td>
<td>Listed</td>
</tr>
</tbody>
</table>

#### U.S. Federal Regulations

**SARA 313**
This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**
This product does not contains HAPs.

#### U.S. State Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts - RTK</th>
<th>New Jersey - RTK</th>
<th>Pennsylvania - RTK</th>
<th>Illinois - RTK</th>
<th>Rhode Island - RTK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiocyanic acid, compound with guanidine (1:1)</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
</tbody>
</table>

**California Proposition 65**
This product does not contain chemicals listed under Proposition 65
**WHMIS hazard class:**
Non-controlled

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

### 16. OTHER INFORMATION

This material is sold for research and development purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. It is not intended for food, drug, household, agricultural, or cosmetic use. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material.

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**End of Safety Data Sheet**