Safety Data Sheet

Cat. # 786-453

Phosphatase Assay kit

Size: 1,000 Assays
SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : PA Buffer
Product code : 003P

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling
No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical

No additional information available
### 5.3. Special protective equipment and precautions for fire-fighters

| Protection during firefighting | Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

| Emergency procedures | Ventilate spillage area. |

#### 6.1.2. For emergency responders

| Protective equipment | Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

| Methods for cleaning up | Take up liquid spill into absorbent material. |

| Other information | Dispose of materials or solid residues at an authorized site. |

### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

| Precautions for safe handling | Ensure good ventilation of the work station. Wear personal protective equipment. |

| Hygiene measures | Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

#### 7.2. Conditions for safe storage, including any incompatibilities

| Storage conditions | Store in a well-ventilated place. Keep cool. |

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

| Appropriate engineering controls | Ensure good ventilation of the work station. |

| Environmental exposure controls | Avoid release to the environment. |

#### 8.3. Individual protection measures/Personal protective equipment

**Hand protection:**

- Protective gloves

**Eye protection:**

- Safety glasses

**Skin and body protection:**

- Wear suitable protective clothing

**Respiratory protection:**

- In case of insufficient ventilation, wear suitable respiratory equipment

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

| Physical state | Liquid |

| Color          | No data available |

| Odor           | No data available |
### Odor threshold
No data available

### pH
No data available

### Melting point
Not applicable

### Freezing point
No data available

### Boiling point
No data available

### Flash point
No data available

### Relative evaporation rate (butyl acetate=1)
No data available

### Flammability (solid, gas)
Not applicable.

### Vapor pressure
No data available

### Relative vapor density at 20 °C
No data available

### Relative density
No data available

### Solubility
No data available

### Log Pow
No data available

### Auto-ignition temperature
No data available

### Decomposition temperature
No data available

### Viscosity, kinematic
No data available

### Viscosity, dynamic
No data available

### Explosion limits
No data available

### Explosive properties
No data available

### Oxidizing properties
No data available

### Other information
No additional information available

### SECTION 10: Stability and reactivity

#### Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

#### Chemical stability
Stable under normal conditions.

#### Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

#### Conditions to avoid
None under recommended storage and handling conditions (see section 7).

#### Incompatible materials
No additional information available

#### Hazardous decomposition products
Hazardous decomposition products.

### SECTION 11: Toxicological information

#### Information on toxicological effects

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
### SECTION 12: Ecological information

#### 12.1. Toxicity

**Ecology - general**
- The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

#### 12.2. Persistence and degradability

- No additional information available

#### 12.3. Bioaccumulative potential

- No additional information available

#### 12.4. Mobility in soil

- No additional information available

#### 12.5. Other adverse effects

- No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

**Waste treatment methods**
- Waste treatment methods.

### SECTION 14: Transport information

**Department of Transportation (DOT)**
- In accordance with DOT

- Not applicable

**Transportation of Dangerous Goods**
- Not applicable

**Transport by sea**
- Not applicable

**Air transport**
- Not applicable

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

- No additional information available

#### 15.2. International regulations

**CANADA**
- No additional information available

**EU-Regulations**
- No additional information available

**National regulations**
- No additional information available

#### 15.3. US State regulations
SECTION 16: Other information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
SECTION 1: Identification

1.1. Identification

Product form: Substance
Substance name: Phosphatase Assay Substrate
Product code: 005P

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504

1.4. Emergency telephone number

Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling
No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized water</td>
<td></td>
<td>(CAS-No.) 7732-18-5</td>
<td>0.08 - 0.8</td>
<td>Not classified</td>
</tr>
<tr>
<td>Name</td>
<td>Common Name (Synonyms)</td>
<td>Product identifier</td>
<td>%</td>
<td>GHS-US classification</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------------</td>
<td>------------------------------------------------------------</td>
</tr>
<tr>
<td>Diethanolamine</td>
<td>2,2'-aminoethanol, conc&gt;85%, aqueous solutions / 2,2'-dihydroxydiethylamine, conc&gt;85%, aqueous solutions / 2,2'-iminobis(ethanol), conc&gt;85%, aqueous solutions / 2,2'-iminobis-ethanol, conc&gt;85%, aqueous solutions / amine, diethyl, 2,2'-dihydroxy-, conc&gt;85%, aqueous solutions / aminodiethanol, conc&gt;85%, aqueous solutions / beta,beta'-dihydroxydiethylamine, conc&gt;85%, aqueous solution / bis(2-hydroxyethyl)amine, conc&gt;85%, aqueous solutions / di(2-hydroxyethyl)amine, conc&gt;85%, aqueous solutions / di-2-hydroxyethylamine, conc&gt;85%, aqueous solutions / ethanol, 2,2'-iminobis- / ethanol, 2,2'-iminobis-, conc&gt;85%, aqueous solutions / ethanol, 2,2'-imino-, conc&gt;85%, aqueous solutions / iminodiethanol, conc&gt;85%, aqueous solutions / N,N-bis(2-hydroxyethyl)amine, conc&gt;85%, aqueous solutions / N,N-diethanolamine, conc&gt;85%, aqueous solutions</td>
<td>(CAS-No.) 111-42-2</td>
<td>0.007 - 0.26</td>
<td>Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT RE 2, H373</td>
</tr>
<tr>
<td>Soy Powder</td>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)</td>
<td>0.015 - 0.15</td>
<td>Not classified</td>
<td></td>
</tr>
<tr>
<td>kathon CG</td>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)</td>
<td>0.002 - 0.02</td>
<td>Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
<td></td>
</tr>
<tr>
<td>tris(hydroxymethyl)aminomethane</td>
<td>1,1,1-tris(hydroxymethyl)methylamine / 1,3-propanediol, 2-amino-2-(hydroxymethyl)- / 2-amino-2-(hydroxymethyl)-1,3-propanediol / 2-amino-2-(hydroxymethyl)propane-1,3-diol / 2-amino-2-hydroxyethylamine / 1,3-propanediol / 2-amino-2-hydroxyethylpropanediol / 2-amino-2-methylol-1,3-propanediol / addex-tham / aminotrimethylolmethane / aminotrishydroxymethyl)methane / methanamine, 1,1,1-tris(hydroxymethyl)- / methylamine, 1,1,1-tris(hydroxymethyl)- / pehanorm / TALATROL / THAM / THAM set / THAM-E / tri(hydroxymethyl)methylamine / trimethylolaminomethane / TRIS / tris (buffering agent) / tris amine buffer / TRIS AMINO / TRIS buffer / TRIS(base) / tris(hydroxymethyl)methanamine / tris(hydroxymethyl)methylamine / trisamin / trisamine / trisaminol / tris(hydroxyethyl)aminomethan / tris(hydroxyethyl)aminomethane / TRISPUFFER / TRIS-STERIL / TRIZMA / troetamol / troetamole / tromethamine / TROMETHANE / tromethamine / tutofusin TRIS</td>
<td>(CAS-No.) 77-86-1</td>
<td>0.002 - 0.02</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution (Note B)</td>
<td>hydrochloric acid, conc=37%, aqueous solution</td>
<td>(CAS-No.) 7647-01-0</td>
<td>0.0001 - 0.02</td>
<td>Skin Corr. 1A, H314 STOT SE 3, H335</td>
</tr>
<tr>
<td>sodium hydroxide</td>
<td>anhydrous caustic soda / B751 / caustic alkali / caustic flake / caustic soda / caustic, bead / caustic soda, dry / caustic soda, flake / caustic soda, granular / caustic soda, lye / caustic soda, solid / caustic white / caustic, flaked / hydrate of soda / hydrate of sodium / hydroxide of soda / hydroxide of sodium / LEWIS red devil lye / lye (=sodium hydroxide) / soda lye / soda, caustic / soda, hydrate / sodium hydrate / sodium hydrate lye / sodium hydroxide / sodium hydroxide (Na(OH)) / sodium hydroxide, bead / sodium hydroxide, dry / sodium hydroxide, flake / sodium hydroxide, granular / sodium hydroxide, pellets / sodium hydroxide, solid / white caustic</td>
<td>(CAS-No.) 1310-73-2</td>
<td>0.001 - 0.01</td>
<td>Met. Corr. 1, H290 Skin Corr. 1, H314 Aquatic Acute 3, H402</td>
</tr>
</tbody>
</table>

Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: ‘nitric acid … %’. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact: Rinse eyes with water as a precaution.
First-aid measures after ingestion: Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact: May cause an allergic skin reaction.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.
6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Take up liquid spill into absorbent material.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH Ceiling (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>kathon CG (55965-84-9)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Deionized water (7732-18-5)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Soy Powder</td>
<td>Not applicable</td>
</tr>
<tr>
<td>tri(hydroxymethyl)aminomethane (77-86-1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Diethanolamine (111-42-2)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls
Appropriate engineering controls: Ensure good ventilation of the work station.
Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment
**Phosphatase Assay Substrate**

**Safety Data Sheet**

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### SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**9.2. Other information**

No additional information available

### SECTION 10: Stability and reactivity

**10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

None under recommended storage and handling conditions (see section 7).

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

Hazardous decomposition products.

### SECTION 11: Toxicological information

**11.1. Information on toxicological effects**

| Acute toxicity (oral)                          | Not classified                 |
| Acute toxicity (dermal)                        | Not classified                 |
| Acute toxicity (inhalation)                     | Not classified                 |

**kathon CG (55965-84-9)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 2000 mg/kg (Rat)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 5000 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>700 ppmV/4h</td>
</tr>
</tbody>
</table>
# Phosphatase Assay Substrate
## Safety Data Sheet

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<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>LD50 dermal rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>kathon CG (55965-84-9)</td>
<td>&gt; 5000 mg/kg body weight</td>
<td>&gt; 5000 mg/kg body weight</td>
</tr>
<tr>
<td>tris(hydroxyethyl)aminomethane (77-86-1)</td>
<td>&gt; 5000 mg/kg body weight</td>
<td>&gt; 5000 mg/kg body weight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>ATE US (oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethanolamine (111-42-2)</td>
<td>&gt; 710 mg/kg (Rat, Oral)</td>
<td>500 mg/kg body weight</td>
</tr>
</tbody>
</table>

### Skin corrosion/irritation
- Not classified

### Respiratory or skin sensitization
- Not classified

### Germ cell mutagenicity
- Not classified

### Carcinogenicity
- Not classified

### Reproductive toxicity
- Not classified

### Specific target organ toxicity – single exposure
- Not classified

### Specific target organ toxicity – repeated exposure
- May cause damage to organs through prolonged or repeated exposure.

### Aspiration hazard
- Not classified

### Viscosity, kinematic
- No data available

### Symptoms/effects after skin contact
- May cause an allergic skin reaction.

### Ecological information

#### 12.1. Toxicity
- The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

#### 12.2. Persistence and degradability

- Specific target organ toxicity – single exposure: May cause respiratory irritation.
- Specific target organ toxicity – repeated exposure: Not classified

#### Diethanolamine (111-42-2)
- Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.
- Aspiration hazard: Not classified
- Viscosity, kinematic: No data available
- Symptoms/effects after skin contact: May cause an allergic skin reaction.

### sodium hydroxide (1310-73-2)

#### LC50 fish 1
- 45.4 mg/l (96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Solution >=50%)
- 40.4 mg/l (48 h, Daphnia magna, Pure substance)

#### tris(hydroxyethyl)aminomethane (77-86-1)
- > 980 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

#### hydrogen chloride, conc=36%, aqueous solution (7647-01-0)
- 282 mg/l (96 h, Gambusia affinis, Pure substance)
- < 56 mg/l (72 h, Daphnia magna, Pure substance)

### Diethanolamine (111-42-2)
- 1664 mg/l (96 h, Pimephales promelas, Pure substance)
- 55 mg/l (48 h, Daphnia magna, Pure substance)
<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>kathon CG (55965-84-9)</strong></td>
<td>Contains non readily biodegradable component(s).</td>
</tr>
<tr>
<td><strong>sodium hydroxide (1310-73-2)</strong></td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td><strong>Chemical oxygen demand (COD)</strong></td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td><strong>ThOD</strong></td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td><strong>tris(hydroxymethyl)aminomethane (77-86-1)</strong></td>
<td>Readily biodegradable in water.</td>
</tr>
<tr>
<td><strong>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</strong></td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td><strong>Chemical oxygen demand (COD)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>ThOD</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>BOD (% of ThOD)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Diethanolamine (111-42-2)</strong></td>
<td>Readily biodegradable in water.</td>
</tr>
<tr>
<td><strong>Biochemical oxygen demand (BOD)</strong></td>
<td>0.22 g O₂/g substance</td>
</tr>
<tr>
<td><strong>Chemical oxygen demand (COD)</strong></td>
<td>1.52 g O₂/g substance</td>
</tr>
<tr>
<td><strong>ThOD</strong></td>
<td>2.13 g O₂/g substance</td>
</tr>
<tr>
<td><strong>BOD (% of ThOD)</strong></td>
<td>0.1</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>kathon CG (55965-84-9)</strong></td>
<td>Does not contain bioaccumulative component(s).</td>
</tr>
<tr>
<td><strong>sodium hydroxide (1310-73-2)</strong></td>
<td>Not bioaccumulative.</td>
</tr>
<tr>
<td><strong>tris(hydroxymethyl)aminomethane (77-86-1)</strong></td>
<td>Not bioaccumulative.</td>
</tr>
<tr>
<td><strong>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</strong></td>
<td>Not bioaccumulative.</td>
</tr>
<tr>
<td><strong>Diethanolamine (111-42-2)</strong></td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Substance</th>
<th>Mobility in soil</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>kathon CG (55965-84-9)</strong></td>
<td>No (test)data on mobility of the components available.</td>
</tr>
<tr>
<td><strong>sodium hydroxide (1310-73-2)</strong></td>
<td>No (test)data on mobility of the substance available.</td>
</tr>
<tr>
<td><strong>tris(hydroxymethyl)aminomethane (77-86-1)</strong></td>
<td>Highly mobile in soil.</td>
</tr>
<tr>
<td><strong>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</strong></td>
<td>Highly mobile in soil.</td>
</tr>
<tr>
<td><strong>Diethanolamine (111-42-2)</strong></td>
<td>No (test)data on mobility of the components available.</td>
</tr>
</tbody>
</table>
12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations
13.1. Disposal methods

SECTION 14: Transport information
Department of Transportation (DOT)
In accordance with DOT
Not applicable
Transportation of Dangerous Goods
Not applicable
Transport by sea
Not applicable
Air transport
Not applicable

SECTION 15: Regulatory information
15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>TSCA Inventory Status</th>
<th>CERCLA RQ</th>
<th>RQ (Reportable quantity, section 304 of EPA's List of Lists)</th>
<th>SARA Section 302 Threshold Planning Quantity (TPQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphatase Assay Substrate</td>
<td>Not listed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>kathon CG (55965-84-9)</td>
<td>Not listed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td>Not listed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deionized water (7732-18-5)</td>
<td>Listed</td>
<td>1000 lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soy Powder</td>
<td>Not listed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tris(hydroxymethyl)aminomethane (77-86-1)</td>
<td>Listed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</td>
<td>Listed</td>
<td>5000 lb</td>
<td>5000 lb</td>
<td>500 lb</td>
</tr>
<tr>
<td>Diethanolamine (111-42-2)</td>
<td>Not listed</td>
<td>100 lb</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15.2. International regulations

**CANADA**
No additional information available

<table>
<thead>
<tr>
<th>Substance</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized water (7732-18-5)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td>tris(hydroxymethyl)aminomethane (77-86-1)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

**EU-Regulations**
No additional information available

**National regulations**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethanolamine (111-42-2)</td>
<td>Listed on IARC (International Agency for Research on Cancer)</td>
</tr>
</tbody>
</table>

15.3. US State regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>California - Proposition 65 - Carcinogens List</th>
<th>California - Proposition 65 - Developmental Toxicity</th>
<th>California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significant risk level (NSRL)</th>
<th>Maximum allowable dose level (MADL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethanolamine (111-42-2)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H290</td>
<td>May be corrosive to metals</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

SDS US (GHS HazCom 2012)
Phosphatase Assay Substrate
Safety Data Sheet

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.