1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Doxosome™ Kit-Doxorubicin Liposomes (Non-PEGylated) (Vial 1 of 3)
Product Number: DOX-NP-5000
Brand: DOXOSOME™
Company Address: ENCAPSULA NANOSCIENCES LLC
5409 Maryland Way, Suite 360
Brentwood, TN, 37027
Technical Phone: 615-884-4442
Fax: 615-250-8747
Emergency Phone: 615-438-8553

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS#</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt;90</td>
</tr>
<tr>
<td>Sodium citrate</td>
<td>77-92-9</td>
<td>&lt;5</td>
</tr>
<tr>
<td>L-α-phosphatidylcholine</td>
<td>97281-44-2</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>57-88-5</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

OSHA
No known OSHA hazards.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
Not a hazardous substance or mixture.
4. FIRST AID MEASURES

**ORAL EXPOSURE**
Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**INHALATION EXPOSURE**
If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen. Consult a physician.

**DERMAL EXPOSURE**
In case of contact, immediately wash skin with soap and copious amounts of water. Contact a physician.

**EYE EXPOSURE**
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Contact a physician.
5. FIRE FIGHTING MEASURES

FLAMMABILITY
Not flammable or combustible.

EXTINGUISHING MEDIA
It is suitable to use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

HAZARDOUS COMBUSTION PRODUCTS
Hazardous decomposition products formed under fire conditions, carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

METHODS FOR CLEANING UP
Absorb any spilled material quickly using absorbent pads. Wipe area to remove as much of the liquid as possible. Apply bleach to the affected area and let sit for several hours. Clean the affected area thoroughly with soap and water to remove the bleach. Collect all cleanup materials and dispose of them in accordance with local, state and federal waste disposal laws.

ENVIRONMENTAL PRECAUTIONS
Do not let product enter drains. If safe to do so prevent further leakages or spills.

PERSONAL PRECAUTIONS
Use personal protective equipment. Avoid breathing in vapors, mist or gas. Ensure adequate ventilation. Prepare evacuation sites.

7. HANDLING AND STORAGE

HANDLING
User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Wash hands thoroughly after handling.

STORAGE
Suitable: Keep in tightly closed container. Store in temperature between approximately 2-8 °C. Do not freeze. Product is sensitive to moisture and light.
8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS
Contains no substances with occupational exposure limit values

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where protection is desired, use full face respirator type N100 (US) or type P3 (EN 143) as back up to engineering controls.

Hand: Compatible chemical-resistant gloves

Eye: Chemical safety goggles with side shades conforming to EN166. Use equipment approved under government standards NIOSH (US) or EN 166(EU).

Skin and Body: Wear a complete suit protecting against chemicals.

GENERAL HYGIENE MEASURES
Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Prepare all materials under the fume hood and avoid generating aerosols.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White translucent liquid</td>
</tr>
<tr>
<td>Safety data</td>
<td>pH 4</td>
</tr>
<tr>
<td>Melting point</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash point</td>
<td>N/A</td>
</tr>
<tr>
<td>Ignition Temperature</td>
<td>N/A</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper Explosion limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>N/A</td>
</tr>
<tr>
<td>Density</td>
<td>N/A</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

STORAGE STABILITY
Store under recommended conditions. At 4°C in refrigerator.

MATERIALS TO AVOID
Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous decomposition products formed under fire conditions- Carbon oxides.

CONDITIONS TO AVOID
Light and exposure to moisture.

11. TOXICOLOGICAL INFORMATION

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the IARC.

**OHSA:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the OHSA.

**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the ACGIH.

**EPA:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the EPA.

**ACUTE TOXICITY**
No information available

**ROUTE OF EXPOSURE**

- **Skin Contact:** N/A
- **Germ Cell Mutagenicity:** N/A
- **Eye Contact:** May cause eye irritation
- **Inhalation:** N/A
- **Ingestion:** N/A
12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Elimination information (persistence and degradability)</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecotoxicity effects</td>
<td>N/A</td>
</tr>
<tr>
<td>Further information on ecology</td>
<td>N/A</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

**PRODUCT**
Observe all federal, state, and local environment regulations. Contact a licensed professional waste disposal service to remove this material. Dissolve or mix the material with a combustible solvent and burn chemical in incinerator equipped with an afterburner and scrubber.

**CONTAMINATED PACKAGING**
Dispose of as unused product.

14. TRANSPORT INFORMATION

**DOT (US)** Not dangerous goods

**IMDG** Not dangerous goods

**IATA** Not dangerous goods

15. REGULATORY INFORMATION

**SARA 302 COMPONENTS**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

**SARA 313 COMPONENTS**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed threshold (De Minimis) reporting levels established by SARA Title III, Section 313

**SARA 311/312 HAZARDS**
Acute health hazards
MASSACHUSETTS RIGHT TO KNOW COMPONENTS
This product does not contain any chemicals known to the state of MA to cause cancer, birth, or other reproductive defects.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS
<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
</tr>
<tr>
<td>L-α-Phosphatidylcholine</td>
<td>97281-44-2</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>57-88-5</td>
</tr>
</tbody>
</table>

NEW JERSEY RIGHT TO KNOW COMPONENTS
<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>Citric acid</td>
<td>77-92-9</td>
</tr>
<tr>
<td>L-α-Phosphatidylcholine</td>
<td>97281-44-2</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>57-88-5</td>
</tr>
</tbody>
</table>

CALIFORNIA PROP. 65 COMPONENTS
This product does not contain any chemicals known to the state of CA to cause cancer, birth, or other reproductive defects.

16. OTHER INFORMATION

Copyright 2013 Encapsula NanoSciences LLC license granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not support to be all inclusive and shall be used only as a guide.

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Encapsula NanoSciences LLC shall not be held liable for any damage resulting from handling or from contact with the above product.
1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Doxosome™ Kit-Doxorubicin Liposomes (Non-PEGylated) (Vial 2 of 3)
Product Number: DOX-NP-5000
Brand: DOXOSOME™
Company Address: ENCAPSULA NANOSCIENCES LLC
5409 Maryland Way, Suite 360
Brentwood, TN, 37027
Technical Phone: 615-884-4442
Fax: 615-250-8747
Emergency Phone: 615-438-8553

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<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS#</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt;90</td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)
(Category 2A) Eye Irritant, H319

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
Pictogram

Signal word: Warning
# Safety Data Sheet

**Version 2.2**

**Revision Date:** 03/21/2018

## HAZARD STATEMENTS

### Eye Irrit.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye irritation</td>
<td></td>
</tr>
</tbody>
</table>

### H319

Causes serious eye irritation

## PRECAUTIONARY STATEMENTS

### P264

Wash skin after handling

### P280

Wear protective gear when handling

### P305, P351, P338

If in eyes rinse thoroughly

### P337, P313

If eye irritation occurs get medical advice

## HMIS RATING

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH HAZARDS:</td>
<td>2</td>
</tr>
<tr>
<td>FLAMMABILITY:</td>
<td>0</td>
</tr>
<tr>
<td>CHRONIC HEALTH HAZARDS:</td>
<td>0</td>
</tr>
<tr>
<td>PHYSICAL HAZARDS:</td>
<td>0</td>
</tr>
</tbody>
</table>

## NFPA RATING

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH HAZARD:</td>
<td>2</td>
</tr>
<tr>
<td>FLAMMABILITY:</td>
<td>0</td>
</tr>
<tr>
<td>REACTIVITY:</td>
<td>0</td>
</tr>
</tbody>
</table>

## POTENTIAL HEALTH EFFECTS

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>May cause eye irritation.</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

**ORAL EXPOSURE**
Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**INHALATION EXPOSURE**
If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen. Consult a physician.

**DERMAL EXPOSURE**
In case of contact, immediately wash skin with soap and copious amounts of water. Contact a physician.

**EYE EXPOSURE**
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Contact a physician.

5. FIRE FIGHTING MEASURES

**FLAMMABILITY**
Not flammable or combustible.

**EXTINGUISHING MEDIA**
It is suitable to use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**HAZARDOUS COMBUSTION PRODUCTS**
Hazardous decomposition products formed under fire conditions, carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

**METHODS FOR CLEANING UP**
Absorb any spilled material quickly using absorbent pads. Wipe area to remove as much of the liquid as possible. Apply bleach to the affected area and let sit for several hours. Clean the affected area thoroughly with soap and water to remove the bleach. Collect all cleanup materials and dispose of them in accordance with local, state and federal waste disposal laws.
ENVIRONMENTAL PRECAUTIONS
Do not let product enter drains. If safe to do so prevent further leakages or spills.

PERSONAL PRECAUTIONS
Use personal protective equipment. Avoid breathing in vapors, mist or gas. Ensure adequate ventilation. Prepare evacuation sites.

7. HANDLING AND STORAGE

HANDLING
User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Wash hands thoroughly after handling.

STORAGE
Suitable: Keep in tightly closed container. Store in temperature between approximately 2-8 °C. Do not freeze. Product is sensitive to moisture and light.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS
Contains no substances with occupational exposure limit values

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where protection is desired, use full face respirator type P95 (US) or P1 (EU EN 143) for higher level protection use OV/AG/P99 (US) or type ABEK-P2 (EU EN 143).

Hand: Compatible chemical-resistant gloves. Dispose of gloves with proper technique to avoid skin contact. Recommended material is nitrile rubber with a thickness of 0.11 mm.

Eye: Chemical safety goggles with side shades conforming to EN166. Use equipment approved under government standards NIOSH (US) or EN 166(EU).

Skin and Body: Wear a complete suit protecting against chemicals.

FULL CONTACT
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)
GENERAL HYGIENE MEASURES
Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Prepare all materials under the fume hood and avoid generating aerosols.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Translucent liquid</td>
</tr>
<tr>
<td>Safety data pH</td>
<td>11.4</td>
</tr>
<tr>
<td>Melting point</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash point</td>
<td>N/A</td>
</tr>
<tr>
<td>Ignition Temperature</td>
<td>N/A</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper Explosion limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>N/A</td>
</tr>
<tr>
<td>Density</td>
<td>N/A</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

STORAGE STABILITY
Store under recommended conditions.

MATERIALS TO AVOID
Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous decomposition products formed under fire conditions- Carbon oxides and sodium oxides.
11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY
This product contains a component that has been reported to be carcinogenic based on its IARC, OHSA, ACGIH, NTP, or EPA classification.

- **IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the IARC.

- **OHSA:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the OHSA.

- **ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the ACGIH.

- **EPA:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the EPA.

ACUTE TOXICITY
No information available

ROUTE OF EXPOSURE
<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Contact:</td>
<td>May cause skin irritation</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity:</td>
<td>N/A</td>
</tr>
<tr>
<td>Eye Contact:</td>
<td>May cause eye irritation</td>
</tr>
<tr>
<td>Inhalation:</td>
<td>N/A</td>
</tr>
<tr>
<td>Ingestion:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ADDITIONAL INFORMATION
RTECS: VZ4050000
Burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting
12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Elimination information (persistence and degradability)</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecotoxicity effects</td>
<td>N/A</td>
</tr>
<tr>
<td>Further information on ecology</td>
<td>N/A</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

**PRODUCT**
Observe all federal, state, and local environment regulations. Contact a licensed professional waste disposal service to remove this material.

**CONTAMINATED PACKAGING**
Dispose of as unused product.

14. TRANSPORT INFORMATION

**DOT (US)**
Not dangerous goods

**IMDG**
Not dangerous goods

**IATA**
Not dangerous goods

15. REGULATORY INFORMATION

**SARA 302 COMPONENTS**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

**SARA 313 COMPONENTS**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed threshold (De Minimis) reporting levels established by SARA Title III, Section 313

**SARA 311/312 HAZARDS**
Acute health hazards
MASSACHUSETTS RIGHT TO KNOW COMPONENTS
This product does not contain any chemicals known to the state of MA to cause cancer, birth, or other reproductive defects.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
</tr>
</tbody>
</table>

NEW JERSEY RIGHT TO KNOW COMPONENTS

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
</tr>
</tbody>
</table>

CALIFORNIA PROP. 65 COMPONENTS
This product does not contain any chemicals known to the state of CA to cause cancer, birth, or other reproductive defects.

16. OTHER INFORMATION

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The above information is believed to be correct but does not support to be all inclusive and shall be used only as a guide.

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1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Doxosome™ Kit-Doxorubicin Liposomes (Non-PEGylated) (Vial 3 of 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number:</td>
<td>DOX-NP-5000</td>
</tr>
<tr>
<td>Brand:</td>
<td>DOXOSOME™</td>
</tr>
</tbody>
</table>
| Company Address: | ENCAPSULA NANOSCIENCES LLC  
5409 Maryland Way, Suite 360  
Brentwood, TN, 37027 |
| Technical Phone: | 615-884-4442 |
| Fax: | 615-250-8747 |
| Emergency Phone: | 615-438-8553 |

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS#</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt;90</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>7647-14-5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Lactose</td>
<td>63-42-3</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Doxorubicin hydrochloride</td>
<td>25316-40-9</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

**GHS CLASSIFICATIONS IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)**
- Acute toxicity, Oral (Category 4), H302
- Skin irritation (Category 2), H315
- Eye irritation (Category 2A), H319
- Carcinogenicity (Category 1B), H350

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS**

Pictogram

![Pictogram]

Signal word: Danger
HAZARD STATEMENTS

Acute Tox. Acute toxicity
Carc. Carcinogenicity
Eye Irrit. Eye irritation

H302 Harmful if Swallowed
H350 May cause cancer
H315 Causes skin irritation
H319 Causes serious eye irritation
Skin Irrit. Skin irritation

PRECAUTIONARY STATEMENTS

P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read
P264 Wash skin after handling
P270 Do not consume food or drink or indulge in smoking while using this product
P280 Wear protective gear when handling
P301, P312 If swallowed call poison center
P302, P352 If on skin wash skin thoroughly
P305, P351, P338 If in eyes rinse thoroughly
P308, P313 If exposed or concerned: get medical advice and/or attention
P321 Specific treatment
P330 Rinse mouth
P332, P313 If skin irritation occurs get medical advice
P337, P313 If eye irritation occurs get medical advice
P362 Take off contaminated clothes and wash before reuse
P405 Store in lock up
P501 Dispose of contents in waste disposal plant
**HMIS RATING**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH HAZARDS:</td>
<td>2</td>
</tr>
<tr>
<td>FLAMMABILITY:</td>
<td>0</td>
</tr>
<tr>
<td>CHRONIC HEALTH HAZARDS:</td>
<td>*</td>
</tr>
<tr>
<td>PHYSICAL HAZARDS:</td>
<td>0</td>
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</tbody>
</table>

**NFPA RATING**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH HAZARD:</td>
<td>2</td>
</tr>
<tr>
<td>FLAMMABILITY:</td>
<td>0</td>
</tr>
<tr>
<td>REACTIVITY:</td>
<td>0</td>
</tr>
</tbody>
</table>

**POTENTIAL HEALTH EFFECTS**

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May be harmful if inhaled. May cause respiratory tract irritation.</td>
</tr>
<tr>
<td>Skin</td>
<td>May be harmful if absorbed through skin. May cause skin irritation.</td>
</tr>
<tr>
<td>Eyes</td>
<td>May cause eye irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed.</td>
</tr>
</tbody>
</table>

**4. FIRST AID MEASURES**

**ORAL EXPOSURE**

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**INHALATION EXPOSURE**

If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen. Consult a physician.

**DERMAL EXPOSURE**

In case of contact, immediately wash skin with soap and copious amounts of water. Contact a physician.

**EYE EXPOSURE**

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Contact a physician.
5. FIRE FIGHTING MEASURES

**FLAMMABILITY**
Not flammable or combustible.

**EXTINGUISHING MEDIA**
It is suitable to use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**HAZARDOUS COMBUSTION PRODUCTS**
Hazardous decomposition products formed under fire conditions, carbon oxides, nitrogen oxides and hydrogen chloride gases.

6. ACCIDENTAL RELEASE MEASURES

**METHODS FOR CLEANING UP**
Absorb any spilled material quickly using absorbent pads. Wipe area to remove as much of the liquid as possible. Apply bleach to the affected area and let sit for several hours. Clean the affected area thoroughly with soap and water to remove the bleach. Collect all cleanup materials and dispose of them in accordance with local, state and federal waste disposal laws.

**ENVIRONMENTAL PRECAUTIONS**
Do not let product enter drains. If safe to do so prevent further leakages or spills.

**PERSONAL PRECAUTIONS**
Use personal protective equipment. Avoid breathing in vapors, mist or gas. Ensure adequate ventilation. Prepare evacuation sites.

7. HANDLING AND STORAGE

**HANDLING**
User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Wash hands thoroughly after handling.

**STORAGE**
Suitable: Keep in tightly closed container. Store in temperature between approximately 2-8 °C. Do not freeze. Product is sensitive to moisture and light.
8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS
Contains no substances with occupational exposure limit values

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where protection is desired, use full face respirator type N100 (US) or type P3 (EN 143) as back up to engineering controls.

Hand: Compatible chemical-resistant gloves

Eye: Chemical safety goggles with side shades conforming to EN166. Use equipment approved under government standards NIOSH (US) or EN 166(EU).

Skin and Body: Wear a complete suit protecting against chemicals.

FULL CONTACT
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

SPASH CONTACT
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

GENERAL HYGIENE MEASURES
Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Prepare all materials under the fume hood and avoid generating aerosols.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Red Translucent liquid</td>
</tr>
<tr>
<td>Safety data</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting point</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash point</td>
<td>N/A</td>
</tr>
<tr>
<td>Ignition Temperature</td>
<td>N/A</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper Explosion limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>N/A</td>
</tr>
<tr>
<td>Density</td>
<td>N/A</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

STORAGE STABILITY
Store under recommended conditions.

MATERIALS TO AVOID
Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS
N/A

CONDITIONS TO AVOID
Light and exposure to moisture.

11. TOXICOLOGICAL INFORMATION

This product contains a component that has been reported to be carcinogenic based on its IARC, OHSA, ACGIH, NTP, or EPA classification.

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the IARC.

**OHSA:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the OHSA.

**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the ACGIH.

**EPA:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by the EPA.
**ACUTE TOXICITY**
Oral LD50- mouse rat-698 mg/kg,
Symptoms: Sense organs and special senses (eye-lacrimation; muscle weakness; diarrhea)

**ROUTE OF EXPOSURE**

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Contact</td>
<td>May cause skin irritation. May cause harm if absorbed.</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>N/A</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>May cause eye irritation</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Can cause respiratory tract irritation if inhaled.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May cause harm if swallowed.</td>
</tr>
</tbody>
</table>

**SIGNS AND SYMPTOMS OF EXPOSURE**
Dehydration, congestion, vomiting, or diarrhea may occur. May also produce inflammatory reactions in the gastrointestinal tract.

**CARCINOGENICITY**
This product is or contains a component that has been reported to be probably carcinogenic on its IARC, OSHA, NTP or EPA classification.

**REPRODUCTIVE TOXICITY**
N/A

**SPECIFIC TARGET ORGAN TOXICITY- SINGLE OR REPEATED**
N/A

**ASPIRATION HAZARDS**
N/A

**ADDITIONAL INFORMATION**
RTECS QI9295900
To the best of our knowledge the chemical, physical, and toxicological properties have not been thoroughly investigated

**LIVER**
Irregularities based on human evidence

### 12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination information (persistence and degradability)</td>
<td>N/A</td>
</tr>
<tr>
<td>Ecotoxicity effects</td>
<td>N/A</td>
</tr>
<tr>
<td>Further information on ecology</td>
<td>N/A</td>
</tr>
</tbody>
</table>
13. DISPOSAL CONSIDERATIONS

PRODUCT
Observe all federal, state, and local environment regulations. Contact a licensed professional waste disposal service to remove this material. Dissolve or mix the material with a combustible solvent and burn chemical in incinerator equipped with an afterburner and scrubber.

CONTAMINATED PACKAGING
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)  Not dangerous goods
IMDG     Not dangerous goods
IATA     Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 COMPONENTS
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 313 COMPONENTS
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed threshold (De Minimis) reporting levels established by SARA Title III, Section 313

SARA 311/312 HAZARDS
Acute health hazards, chronic health hazards

MASSACHUSETTS RIGHT TO KNOW COMPONENTS
This product does not contain any chemicals known to the state of MA to cause cancer, birth, or other reproductive defects.
### PENNSYLVANIA RIGHT TO KNOW COMPONENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td></td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>7647-14-5</td>
<td></td>
</tr>
<tr>
<td>Lactose</td>
<td>63-42-3</td>
<td></td>
</tr>
<tr>
<td>Doxorubicin hydrochloride</td>
<td>25316-40-9</td>
<td>1989-08-11</td>
</tr>
</tbody>
</table>

### NEW JERSEY RIGHT TO KNOW COMPONENTS

<table>
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### CALIFORNIA PROP. 65 COMPONENTS

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<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
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<td>Doxorubicin hydrochloride</td>
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</tbody>
</table>

**WARNING!** This product contains a chemical known to the state of California to cause cancer. 2008-06-17

**WARNING!** This product contains a chemical known to the state of California to cause birth defects or other reproductive harm. 2008-06-17
16. OTHER INFORMATION

Copyright 2013 Encapsula NanoSciences LLC license granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not support to be all inclusive and shall be used only as a guide.

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Encapsula NanoSciences LLC shall not be held liable for any damage resulting from handling or from contact with the above product.