

Version 1.2

Revision Date: 07/05/2016

# 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Non-PEGylated DOTA Liposomes for Remote Loading Radioactive

**Divalent Cations** 

Product Number : DTA-201

Brand : Loadosome™

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

INGREDIENT NAME	CAS#	PERCENT
WATER	7732-18-5	>90
SODIUM CHLORIDE	7647-14-5	<5
4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	<5
1,2-dipalmitoyl-sn-glycero-3-phosphocholine	63-89-8	<5
Cholesterol	57-88-5	<5
1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacet acid (DOTA)	tic 60239-18-1	<5



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# 3. HAZARDS IDENTIFICATION

## **OSHA**

No known OSHA hazards.

## **GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS**

Not a hazardous mixture of substance

#### **HMIS RATING**

HEALTH HAZARDS: 0
FLAMMABILITY: 0
CHRONIC HEALTH HAZARDS: 0
PHYSICAL HAZARDS: 0

## **NFPA RATING**

HEALTH HAZARD: 0
FLAMMABILITY: 0
REACTIVITY: 0

# **POTENTIAL HEALTH EFFECTS**

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed.

# 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, give oxygen. Consult a physician.



## **DERMAL EXPOSURE**

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



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#### **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 sulfur 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.



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#### **STORAGE**

<u>Suitable:</u> Keep in tightly closed container. Store in temperature between approximately 2-8 ° C. Do not freeze.

# 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION



## **ENGINEERING CONTROLS**

Appropriate industrial hygiene.



# PERSONAL PROTECTIVE EQUIPMENT

<u>Respiratory:</u> Where protection is desired, use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

<u>Hand</u>: Compatible chemical-resistant gloves



<u>Eye</u>: Where protection is desired, use chemical safety goggles with side shades conforming to EN166.

<u>Skin and Body</u>: Wear a complete suit protecting against chemicals, if desired.

#### **GENERAL HYGIENE MEASURES**

Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White
Safety data	N/A
Melting point	N/A
<b>Boiling point</b>	N/A
Flash point	N/A
Ignition Temperature	N/A
Lower explosion limit	N/A
Upper Explosion limit	N/A
Water Solubility	N/A
Density	N/A

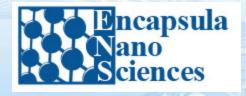
## **10.STABILITY AND REACTIVITY**

#### STORAGE STABILITY

Store under recommended conditions.

### **MATERIALS TO AVOID**

Strong oxidizing agents



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#### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous decomposition products formed under fire conditions- Carbon oxides, nitrogen oxides, sulfur oxides.

## 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 data available

#### **Irritation and Corrosion**

No data available

## **ROUTE OF EXPOSURE**

Skin Contact: May cause skin irritation

Skin Absorption: May be harmful if absorbed through the skin

**Eye Contact:** May cause eye irritation

<u>Inhalation</u>: Materials may be irritating to mucous membranes and upper respiratory tract.

<u>Ingestion</u>: May be harmful if swallowed

#### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### 12.ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

N/A

Ecotoxicity effects

N/A

Further information on ecology

N/A



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## 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

#### **OSHA HAZARDS**

No known OSHA hazards

#### **SARA 302 COMPONENTS**

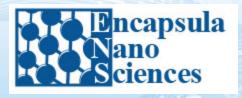
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

# **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**

No SARA hazards



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## MASSACHUSETTS RIGHT TO KNOW COMPONENTS

	CAS-No.	Revision Date
No components are subject to the Massachusetts Right t	o Know Act.	

# PENNSYLVANIA RIGHT TO KNOW COMPONENTS

	CAS-No.	Revision Date
4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	
1,2-dipalmitoyl-sn-glycero-3-phosphocholine	63-89-8	
Cholesterol	57-88-5	
1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid (DOTA)	60239-18-1	

## NEW JERSEY RIGHT TO KNOW COMPONENTS

	CAS-No.	Revision Date
4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	
1,2-dipalmitoyl-sn-glycero-3-phosphocholine	63-89-8	
Cholesterol	57-88-5	
1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid (DOTA)	60239-18-1	

# **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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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.