



## Material Safety Data Sheet



Health	0
Fire	0
Reactivity	0
Personal Protection	E

**Product name:** Clodronate Liposomes  
**Synonyms:** Clophosome<sup>®</sup>, Clophosome<sup>®</sup>-A, Control plain liposomes for Clophosomes  
**Product code:** F70101C-A, F70101C-N, F70101-N, F70101-A, F70101F-A, F70101F-N  
**Revision date:** 12/27/2013

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

**Supplier:**  
**FormuMax Scientific, Inc.**  
4062 Fabian Way  
Palo Alto, CA 94303

**Emergency telephone number:** (408) 607-5788 (24 hours)  
(650) 856-7948 (US day time)

**Product name:** Clodronate Liposomes  
**Synonyms:** Clophosome<sup>®</sup>, Clophosome<sup>®</sup>-A  
**Product code:** F70101C-NA, F70101C-N, F70101C-A  
**Therapeutic class:** none  
**Intended Use:** Used in research only, not for human use

### 2. HAZARDS IDENTIFICATION

#### Emergency overview:

This material is not a controlled product under WHMIS

**Properties affecting health:** n/a

#### Principle routes of exposure:

**Eye Contact:** n/a  
**Skin contact:** n/a  
**Ingestion:** May be harmful if swallowed.  
**Inhalation:** May be harmful by inhalation.

**Physico-chemical properties:** No hazards resulting from material as supplied.

#### Hazard information:

**Target organ effects:** n/a  
**Reproductive effects:** n/a  
**Mutagenic effects:** n/a  
**Sensitization:** n/a

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %
Water	7732-18-5	80-85
Sucrose	57-50-1	10-15
Soy phosphatidylcholine (lecithin)	8002-43-5	1-2
Clodronate disodium (F70101C-A, F70101C-N)	22560-50-5	0.5-0.9
Cholesterol	57-88-5	0.3-0.5
Phosphatidylglycerol (F70101C-A, F70101-A)	322647-44-9	0.3-0.5
Sodium phosphate (Na <sub>2</sub> HPO <sub>4</sub> , NaH <sub>2</sub> PO <sub>4</sub> )	7558-80-7, 7558-79-4	<0.3
Fluorescent dye, Dil (F70101F-A, F70101F-N)	41085-99-8	<0.01

### 4. FIRST AID MEASURES

<b>Oral Exposure:</b>	if swallowed, wash out mouth with water provided person is conscious. Call a physician
<b>Eye contact:</b>	In the case of contact with eyes, check for and remove any contact lenses, rinse immediately with plenty of water for 15 minutes and seek medical attention.
<b>Skin contact:</b>	Remove contaminated clothing immediately and wash skin generously with soap and water. In the case of skin irritation or allergic reactions see a physician.
<b>Ingestion:</b>	Do not induce vomiting. Call a physician immediately.
<b>Inhalation:</b>	Move to fresh air immediately. If experiencing difficulty breathing, seek medical attention.
<b>Notes to physician:</b>	Monitor a complete blood and platelet counts.
<b>Protection of first-aiders:</b>	Follow bloodborne pathogen procedures in the event of accidental injection.

### 5. FIRE-FIGHTING MEASURES

<b>Flash point:</b>	n/a
<b>Autoignition temp:</b>	n/a
<b>Flammability:</b>	n/a
<b>Suitable extinguishing media:</b>	Carbon dioxide, dry chemical powder, foam water spray.
<b>Extinguishing media which must not be used for safety reasons:</b>	None.
<b>Special protective equipment for firefighters:</b>	Wear self-contained breathing apparatus and protective suit.
<b>Specific methods:</b>	None.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Wear splash goggles and skin protection. Use suitable protective equipment.
<b>Environmental precautions:</b>	Collect and discard into appropriate container, then dispose of in accordance with all applicable federal, state and local regulations.
<b>Methods for cleaning up:</b>	Wipe up with absorbent material (e.g. cloth, fleece).

### 7. HANDLING AND STORAGE

<b>Handling: Technical measures/precautions:</b>	No special technical protective measures required.
<b>Safe handling advice:</b>	Avoid contact with skin and eyes. Wash thoroughly after handling.
<b>Storage: Technical measures/storage conditions:</b>	Keep at temperatures between 2 and 8 °C. Keep refrigerated. Do not freeze.



**Other information**

**Explosivity:** None.

**10. STABILITY AND REACTIVITY**

**Chemical stability:** Stable at normal conditions  
**Materials to avoid:** Unknown on product.  
**Conditions to avoid:** Unknown on product.  
**Hazardous polymerization:** Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

**Eye contact:** Irritating to the eyes.

**11. TOXICOLOGICAL INFORMATION**

**Skin contact:** Irritating to the skin.  
**Ingestion:** May be harmful if swallowed.  
**Inhalation:** May be harmful by inhalation.  
**LD50 Oral Mouse (m) (mg/kg):** >2000 (as of clodronate disodium)

**Subchronic toxicity**

No data available.

**Chronic exposure (IARC)**

**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 IARC.  
**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.  
**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Signs and Symptoms of Exposure**

Nausea, Vomiting, Diarrhoea, Rash  
Potential Health Effects  
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

**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.

**Target Organs**

**Additional Information**

Bone, Kidney,

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** This product has no known eco-toxicological effects.  
**Aquatic toxicity effects:** This product has no known aquatic toxicological effects.

**13. DISPOSAL CONSIDERATIONS**

**Waste from residues / unused products:** Waste disposal must be in accordance with appropriate US, Federal, State and international regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

## 14. TRANSPORT INFORMATION

Product not regulated by DOT, IATA/ICAO, IMO/IMDG, ADR/RID, or TDG.

## 15. REGULATORY INFORMATION

Components	CAS Number	SARA 313	SARA 302	CERCLA	CEPA
Sucrose (10-15%)	57-50-1				Listed.

### SARA (311, 312) hazard class

<b>Immediate health:</b>	None.
<b>Delayed health:</b>	None.
<b>Fire:</b>	None.
<b>Sudden Release of Pressure Hazard:</b>	None.
<b>Reactivity:</b>	None.

### State Regulations

Components	CAS Number	NJRTK	PARTK	MARTK	RIRTK
Sucrose (10-30%)	57-50-1		Listed.	Listed.	Listed.
Clodronate disodium (<1%)	22560-50-5				

### International Inventories

Components	TSCA	DSL	NDSL
Sucrose (10-30%)	Listed.	Listed.	
Clodronate disodium (<1%)			

Clodronate disodium: not classified according to the EU regulations

### WHMIS:

<b>WHMIS trade secret:</b>	None.
<b>WHMIS hazard class:</b>	None.

### Notes:

1. SARA = Superfund Amendments and the Reauthorization Act.
2. CERCLA = Comprehensive Environmental Response, Compensations and Liability Act.
3. FIFRA = Federal Insecticide, Fungicide and Rodenticide Act.
4. TSCA = Toxic Substance Control Act.
5. WHMIS = Canadian Workplace Hazardous Materials Information System.
6. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## 16. OTHER INFORMATION

**This data sheet contains changes from the previous version in section(s):**

None.

**MSDS format:** North American Format - U.S. and Canada

### Disclaimer:

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall FormuMax Scientific Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if FormuMax has been advised of the possibility of such damages.

**End of Safety Data Sheet**