



# L-CARNITINE(MONO):CLO4, O-3-DL-HYDROXPALMITOYL (N-METHYL-D3, 98%)

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 22/10/2012

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Version: 2.4

DLM-9189

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Substance  
Substance name : L-CARNITINE(MONO):CLO4, O-3-DL-HYDROXPALMITOYL (N-METHYL-D3, 98%)  
CAS-No. : 2245711-29-7  
Product code : DLM-9189  
Formula : C23H43D3CINO9

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Main use category : Professional use  
Industrial/Professional use spec : For professional use only

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-703-741-5970 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315  
Eye Irrit. 2 H319  
STOT SE 3 H335

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

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R36/37/38

Full text of R-phrases: see section 16

#### GHS-US classification

Skin Irrit. 2 H315  
Eye Irrit. 2 H319  
STOT SE 3 H335

Full text of H statements : see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation

Precautionary statements (CLP) :

P261 - Avoid breathing dust, gas, spray, vapors, mist.  
P264 - Wash hands thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear protective clothing, protective gloves.  
P302+P352 - IF ON SKIN: Wash with plenty of water.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P312 - Call a doctor if you feel unwell.

#### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation

Precautionary statements (GHS-US) :

P261 - Avoid breathing vapors, spray, dust, mist.  
P264 - Wash hands thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear protective gloves, protective clothing.  
P302+P352 - If on skin: Wash with plenty of water  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a doctor if you feel unwell  
P321 - Specific treatment (see Hazardous component(s) for labeling on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

| Name   | Product identifier                       | %   | Classification according to Directive 67/548/EEC                |
|--|--|-----|---|
| L-CARNITINE(MONO):CLO4, O-3-DL-HYDROXYPALMITOYL (N-METHYL-D3, 98%) | (CAS-No.) 2245711-29-7<br>(EC Index-No.) | 100 | Xi; R36/37/38   |
| Name   | Product identifier                       | %   | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
| L-CARNITINE(MONO):CLO4, O-3-DL-HYDROXYPALMITOYL (N-METHYL-D3, 98%) | (CAS-No.) 2245711-29-7<br>(EC Index-No.) | 100 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335    |

Full text of R- and H- phrases: see section 1

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| Name  | Product identifier     | %   | GHS-US classification  |
|---|------------------------|-----|--|
| L-CARNITINE(MONO):CLO4, O-3-DL-HYDROXPALMITOYL (N-METHYL-D3, 98%)<br>(Main constituent) | (CAS-No.) 2245711-29-7 | 100 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335 |

Full text of H-phrases: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.   |
| First-aid measures after inhalation   | : When symptoms occur: go into open air and ventilate suspected area. If not breathing, give artificial respiration. Get medical advice/attention. |
| First-aid measures after skin contact | : Wash with plenty of soap and water. Get immediate medical advice/attention.  |
| First-aid measures after eye contact  | : Rinse cautiously with water for several minutes.   |
| First-aid measures after ingestion    | : Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.                                 |

### 4.2. Most important symptoms and effects, both acute and delayed

|                                     |  |
|-------------------------------------|--|
| Symptoms/effects after inhalation   | : May be harmful if inhaled. May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Causes skin irritation.                                      |
| Symptoms/effects after eye contact  | : Causes serious eye irritation.                               |
| Symptoms/effects after ingestion    | : May be harmful if swallowed.                                 |

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

|                                |   |
|--------------------------------|---|
| Firefighting instructions      | : Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. Wear recommended personal protective equipment.   |

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Avoid breathing vapors, mist, gas. Avoid dust formation.

#### 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

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

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

|                         |  |
|-------------------------|--|
| For containment         | : Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal.       |
| Methods for cleaning up | : This material and its container must be disposed of in a safe way, and as per local legislation. |

### 6.4. Reference to other sections

For further information refer to section 13.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Provide adequate ventilation to minimize dust and/or vapor concentrations.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety practice.

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

- Technical measures : Store in a well-ventilated place. Keep container tightly closed.
- Storage conditions : Store refrigerated (-5°C to 5°C) and desiccated. Protect from light.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



- Materials for protective clothing : Wear suitable protective clothing and gloves.
- Hand protection : Wear suitable protective clothing and gloves.
- Eye protection : Wear eye protection. Chemical goggles or face shield with safety glasses.
- Skin and body protection : Wear suitable protective clothing, gloves and eye/face protection.
- Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.
- Environmental exposure controls : Avoid release to the environment.

### SECTION 9: Physical and chemical properties

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

- Physical state : Solid
- Appearance : Solid
- Molecular mass : 519.08 g/mol (Labeled)
- Color : White
- Odor : No data available
- Odor threshold : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- 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
- Log Kow : No data available
- Viscosity, kinematic : No data available
- Viscosity, dynamic : No data available

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|                      |                     |
|----------------------|---------------------|
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosion limits     | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Three years after receipt of order if stored as stated in "Storage" section. Re-QC after three years.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|   |   |
|---|---|
| Acute toxicity                                      | : Not classified  |
| Skin corrosion/irritation                           | : Causes skin irritation.   |
| Serious eye damage/irritation                       | : Causes serious eye irritation.  |
| Respiratory or skin sensitization                   | : Not classified  |
| Germ cell mutagenicity                              | : Not classified  |
| Carcinogenicity                                     | : Not classified  |
| Reproductive toxicity                               | : Not classified  |
| Specific target organ toxicity – single exposure    | : May cause respiratory irritation.   |
| Specific target organ toxicity – repeated exposure  | : Not classified  |
| Aspiration hazard                                   | : Not classified  |
| Potential Adverse human health effects and symptoms | : 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. |
| Symptoms/effects after inhalation                   | : May be harmful if inhaled. May cause respiratory irritation.  |
| Symptoms/effects after skin contact                 | : Causes skin irritation.   |
| Symptoms/effects after eye contact                  | : Causes serious eye irritation.  |
| Symptoms/effects after ingestion                    | : May be harmful if swallowed.  |

## 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. Results of PBT and vPvB assessment

No additional information available

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### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
- Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
- Ecology - waste materials : Dispose of as unused product.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

Not applicable

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

- Other information : No supplementary information available.
- Special transport precautions : Not dangerous goods.

#### Overland transport

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

### 14.4. Environmental hazards

- Other information : No supplementary information available.

### 14.5. Special precautions for user

- Special transport precautions : Not dangerous goods.

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

| L-CARNITINE(MONO):CLO4, O-3-DL-HYDROXYPALMITOYL (N-METHYL-D3, 98%) (2245711-29-7) |  |
|---|--|
| SARA Section 302 Threshold Planning Quantity (TPQ)                                | Not subject to reporting requirements of the United States SARA Section 302. |
| SARA Section 313 - Emission Reporting   | Not subject to reporting requirements of the United States SARA Section 313. |

### 15.2. International regulations

#### CANADA

| L-CARNITINE(MONO):CLO4, O-3-DL-HYDROXYPALMITOYL (N-METHYL-D3, 98%) (2245711-29-7) |
|---|
| Listed on the Canadian DSL (Domestic Substances List)                             |

#### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

| L-CARNITINE(MONO):CLO4, O-3-DL-HYDROXYPALMITOYL (N-METHYL-D3, 98%)(2245711-29-7) |    |
|--|----|
| U.S. - California - Proposition 65 - Carcinogens List                            | No |
| U.S. - California - Proposition 65 - Developmental Toxicity                      | No |

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|---|--|
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female             | No   |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male               | No   |
| State or local regulations  | RTK - U.S. - Pennsylvania - RTK (Right to Know) List<br>RTK - U.S. - New Jersey - Right to Know Hazardous Substance List |

### SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

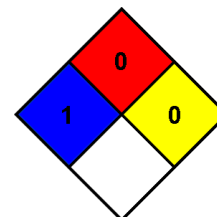
Full text of R-, H- and EUH-phrases:

|               |   |
|---------------|---|
| Eye Irrit. 2  | Serious eye damage/eye irritation Category 2                |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2                        |
| STOT SE 3     | Specific target organ toxicity (single exposure) Category 3 |
| H315          | Causes skin irritation                                      |
| H319          | Causes serious eye irritation                               |
| H335          | May cause respiratory irritation                            |
| R36/37/38     | Irritating to eyes, respiratory system and skin             |
| Xi            | Irritant  |

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



### Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

CIL Substance SDS

*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*