SAFETY DATA SHEET

Version 5.1 Revision Date 11/28/2017
Print Date 11/16/2018

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: 1-dodecanoyl-2-tridecanoyl-sn-glycero-3-phosphocholine

Product Number: LM1000
Brand: AVANTI

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

Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company: Avanti Polar Lipids, INC
700 Industrial Park Drive
Alabaster, Al 35007
United States of America

Telephone: (205) 663-2494
Fax: (205) 663-0756

1.4 Emergency telephone number

Emergency Phone #: +1 703-741-5970 / 1800-424-9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 2), H225
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 3), H311
Specific target organ toxicity - single exposure (Category 1), Eyes, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)
H225: Highly flammable liquid and vapour.
H301 + H311 + H331: Toxic if swallowed, in contact with skin or if inhaled.
H370: Causes damage to organs (Eyes).

Precautionary statement(s)
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Synonyms : 12:0-13:0 PC

Molecular weight : 32.04 g/mol

Hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301 + H311 + H331, H370</td>
<td>90 - 100 %</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 **Most important symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 **Indication of any immediate medical attention and special treatment needed**
No data available

### 5. FIREFIGHTING MEASURES

5.1 **Extinguishing media**

**Suitable extinguishing media**
- Dry powder
- Dry sand

**Unsuitable extinguishing media**
- Do NOT use water jet.

5.2 **Special hazards arising from the substance or mixture**
No data available

5.3 **Advice for firefighters**
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 **Further information**
Use water spray to cool unopened containers.

### 6. ACCIDENTAL RELEASE MEASURES

6.1 **Personal precautions, protective equipment and emergency procedures**
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 **Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 **Methods and materials for containment and cleaning up**
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 **Reference to other sections**
For disposal see section 13.

### 7. HANDLING AND STORAGE

7.1 **Precautions for safe handling**
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 **Conditions for safe storage, including any incompatibilities**
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Recommended storage temperature -25 - -15 °C
Storage class (TRGS 510): 3: Flammable liquids

7.3 **Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 **Control parameters**
Components with workplace control parameters
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
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</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>TWA</td>
<td>200.000000 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
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<td></td>
<td>Remarks</td>
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<td>Headache</td>
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<td>Nausea</td>
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<td>Dizziness</td>
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<td>Eye damage</td>
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<td>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)</td>
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<td>Danger of cutaneous absorption</td>
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<tr>
<td>STEL</td>
<td></td>
<td>TWA</td>
<td>250.000000 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
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<td>260.000000 ppm</td>
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<td>Potential for dermal absorption</td>
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<td>Potential for dermal absorption</td>
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<td>Parameters</td>
<td>Value</td>
<td>Biological specimen</td>
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<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>Methanol</td>
<td>15.0000 mg/l</td>
<td>Urine</td>
</tr>
</tbody>
</table>

**Remarks**
End of shift (As soon as possible after exposure ceases)

**Exposure controls**

**Appropriate engineering controls**
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**Personal protective equipment**

**Eye/face protection**
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**
Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators
and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: liquid
   Colour: colourless

b) Odour
   characteristic

c) Odour Threshold
   No data available

d) pH
   No data available

e) Melting point/freezing point
   Melting point: -98.0 °C (-144.4 °F)

f) Initial boiling point and boiling range
   64.0 - 65.0 °C (147.2 - 149.0 °F) at 1,013 hPa (760 mmHg)

g) Flash point
   9.7 °C (49.5 °F) - closed cup - DIN 51755 Part 111.0 °C (51.8 °F) - closed cup

h) Evaporation rate
   6.3 - Diethylether
   1.9 - n-butyl acetate

i) Flammability (solid, gas)
   No data available

j) Upper/lower flammability or explosive limits
   Upper explosion limit: 36.5 %(V)
   Lower explosion limit: 5.5 %(V)

k) Vapour pressure
   128 hPa (96 mmHg) at 20.0 °C (68.0 °F)

l) Vapour density
   1.11

m) Relative density
   0.79 g/cm3

n) Water solubility
   soluble

o) Partition coefficient: n-octanol/water
   log Pow: -0.77 at 25 °C (77 °F) - (Lit.), Bioaccumulation is not expected.

p) Auto-ignition temperature
   455.0 °C (851.0 °F) at 1,013 hPa (760 mmHg) - DIN 51794

q) Decomposition temperature
   Distillable in an undecomposed state at normal pressure.

r) Viscosity
   0.54 - 0.59 mm2/s at 20 °C (68 °F) -

s) Explosive properties
   No data available

t) Oxidizing properties
   No data available

9.2 Other safety information

Minimum ignition energy
   0.14 mJ

Conductivity
   < 1 µS/cm

Relative vapour density
   1.11

10. STABILITY AND REACTIVITY

10.1 Reactivity
   No data available

10.2 Chemical stability
   Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available
Inhalation: No data available
Dermal: No data available
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
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.
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.

Reproductive toxicity
No data available
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available
Methyl alcohol may be fatal or cause blindness if swallowed.
Effects due to ingestion may include: Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures.
Symptoms may be delayed. Damage of: Liver, Kidney

Stomach - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence
12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1230    Class: 3    Packing group: II
Proper shipping name: Methanol, solution
Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG
UN number: 1230    Class: 3 (6.1)    Packing group: II
EMS-No: F-E, S-D
Proper shipping name: METHANOL, SOLUTION

IATA
UN number: 1230    Class: 3 (6.1)    Packing group: II
Proper shipping name: Methanol, solution

15. REGULATORY INFORMATION

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

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazards
Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
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</tbody>
</table>

Pennsylvania Right To Know Components
Methanol

California Prop. 65 Components
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Methanol

New Jersey Right To Know Components

Methanol

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Acute toxicity
Flam. Liq. Flammable liquids
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H301 + H311 + Toxic if swallowed, in contact with skin or if inhaled.
H331
H311 Toxic in contact with skin.
H331 Toxic if inhaled.
H370 Causes damage to organs.
STOT SE Specific target organ toxicity - single exposure

HMIS Rating
Health hazard: 0
Chronic Health Hazard: *
Flammability: 3
Physical Hazard 0

NFPA Rating
Health hazard: 0
Fire Hazard: 3
Reactivity Hazard: 0

Further information
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Preparation Information
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

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