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

### 1.1 Product identifiers

Product name : 18:1(11-Cis) PC

Product Number : 790626C  
 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

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

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302  
 Acute toxicity, Inhalation (Category 3), H331  
 Skin irritation (Category 2), H315  
 Eye irritation (Category 2A), H319  
 Carcinogenicity (Category 2), H351  
 Reproductive toxicity (Category 2), H361  
 Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336  
 Specific target organ toxicity - repeated exposure (Category 1), Liver, Kidney, H372  
 Short-term (acute) aquatic hazard (Category 3), H402  
 Long-term (chronic) aquatic hazard (Category 3), H412

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)        |                                                                                                                                  |
| H302                       | Harmful if swallowed.                                                                                                            |
| H315                       | Causes skin irritation.                                                                                                          |
| H319                       | Causes serious eye irritation.                                                                                                   |
| H331                       | Toxic if inhaled.                                                                                                                |
| H336                       | May cause drowsiness or dizziness.                                                                                               |
| H351                       | Suspected of causing cancer.                                                                                                     |
| H361                       | Suspected of damaging fertility or the unborn child.                                                                             |
| H372                       | Causes damage to organs (Liver, Kidney) through prolonged or repeated exposure.                                                  |
| H412                       | Harmful to aquatic life with long lasting effects.                                                                               |
| Precautionary statement(s) |                                                                                                                                  |
| P201                       | Obtain special instructions before use.                                                                                          |
| P202                       | Do not handle until all safety precautions have been read and understood.                                                        |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.                                                                             |
| P264                       | Wash skin thoroughly after handling.                                                                                             |
| P270                       | Do not eat, drink or smoke when using this product.                                                                              |
| P271                       | Use only outdoors or in a well-ventilated area.                                                                                  |
| P273                       | Avoid release to the environment.                                                                                                |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                                    |
| P301 + P312 + P330         | IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.                                                      |
| P302 + P352                | IF ON SKIN: Wash with plenty of soap and water.                                                                                  |
| P304 + P340 + P311         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.                         |
| P305 + P351 + P338         | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308 + P313                | IF exposed or concerned: Get medical advice/ attention.                                                                          |
| P332 + P313                | If skin irritation occurs: Get medical advice/ attention.                                                                        |
| P337 + P313                | If eye irritation persists: Get medical advice/ attention.                                                                       |
| P362                       | Take off contaminated clothing and wash before reuse.                                                                            |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.                                                                 |
| P405                       | Store locked up.                                                                                                                 |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.                                                              |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

| Component           |                       | Classification                                                                                                                                                          | Concentration    |
|---------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Chloroform</b>   |                       |                                                                                                                                                                         |                  |
| CAS-No.             | 67-66-3               | Acute Tox. 4; Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2A; Carc. 2; Repr. 2; STOT SE 3; STOT RE 1; Aquatic Acute 3; H302, H331, H315, H319, H351, H361, H336, H372, H402 | >= 90 - <= 100 % |
| EC-No.              | 200-663-8             |                                                                                                                                                                         |                  |
| Index-No.           | 602-006-00-4          |                                                                                                                                                                         |                  |
| Registration number | 01-2119486657-20-XXXX |                                                                                                                                                                         |                  |
|                     |                       | Concentration limits:                                                                                                                                                   |                  |

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

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

#### 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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

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

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Oxides of phosphorus  
Hydrogen chloride gas

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

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## SECTION 6: Accidental release measures

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

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe 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. Discharge into the environment must be avoided.

## 6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

#### Hygiene measures

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

For precautions see section 2.2.

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

#### Storage conditions

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.

#### Storage stability

Recommended storage temperature

-20 °C

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

| Component  | CAS-No. | Value                                                        | Control parameters              | Basis                                   |
|------------|---------|--------------------------------------------------------------|---------------------------------|-----------------------------------------|
| Chloroform | 67-66-3 | TWA                                                          | 10 ppm                          | USA. ACGIH Threshold Limit Values (TLV) |
|            | Remarks | Confirmed animal carcinogen with unknown relevance to humans |                                 |                                         |
|            |         | ST                                                           | 2 ppm<br>9.78 mg/m <sup>3</sup> | USA. NIOSH Recommended Exposure Limits  |
|            |         | Potential Occupational Carcinogen                            |                                 |                                         |

|  |  |     |                                 |                                                                                         |
|--|--|-----|---------------------------------|-----------------------------------------------------------------------------------------|
|  |  | C   | 50 ppm<br>240 mg/m <sup>3</sup> | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants        |
|  |  | PEL | 2 ppm<br>9.78 mg/m <sup>3</sup> | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |

## 8.2 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, 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 multi-purpose combination (US) or type ABEK (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. Discharge into the environment must be avoided.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                                            |                   |
|--------------------------------------------|-------------------|
| a) Appearance                              | Form: liquid      |
| b) Odor                                    | No data available |
| c) Odor Threshold                          | No data available |
| d) pH                                      | No data available |
| e) Melting point/freezing point            | No data available |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point                             | ( )Not applicable |
| h) Evaporation rate                        | No data available |
| i) Flammability (solid,                    | No data available |

|    |                                              |                   |
|----|----------------------------------------------|-------------------|
|    | gas)                                         |                   |
| j) | Upper/lower flammability or explosive limits | No data available |
| k) | Vapor pressure                               | No data available |
| l) | Vapor density                                | No data available |
| m) | Relative density                             | No data available |
| n) | Water solubility                             | No data available |
| o) | Partition coefficient: n-octanol/water       | No data available |
| p) | Autoignition temperature                     | No data available |
| q) | Decomposition temperature                    | No data available |
| r) | Viscosity                                    | No data available |
| s) | Explosive properties                         | No data available |
| t) | Oxidizing properties                         | No data available |

## 9.2 Other safety information

No data available

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## SECTION 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

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

#### Acute toxicity

Acute toxicity estimate Oral - 921.83 mg/kg  
(Calculation method)

Acute toxicity estimate Inhalation - 4 h - 3.15 mg/l  
(Calculation method)

Dermal: No data available

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Chloroform)

NTP: No ingredient 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 on OSHA's list of regulated carcinogens.

**Reproductive toxicity**

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

**11.2 Additional Information**

Not available

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

**Components**

**Chloroform**

**Acute toxicity**

LD50 Oral - Rat - male - 908 mg/kg

(OECD Test Guideline 401)

Acute toxicity estimate Inhalation - Expert judgment - 4 h - 3.1 mg/l

Dermal: No data available

No data available

**Skin corrosion/irritation**

Skin - Rabbit

Result: Irritating to skin. - 24 h

Remarks:

(ECHA)

Drying-out effect resulting in rough and chapped skin.

Skin - Rabbit

Result: slight irritation

Remarks:

(IUCLID)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Irritating to eyes.

Remarks:

(ECHA)

(Regulation (EC) No 1272/2008, Annex VI)

**Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: negative

(Regulation (EC) No. 440/2008, Annex, B.6)

**Germ cell mutagenicity**

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Remarks:

(ECHA)

unscheduled DNA synthesis assay

Liver

Result: negative

Remarks:

(ECHA)

OECD Test Guideline 474

Rat - male and female - Red blood cells (erythrocytes)

Result: negative

OECD Test Guideline 486

Rat - male - Liver cells

Result: negative

Mouse - female

Result: negative

Remarks:

(ECHA)

**Carcinogenicity**

Suspected of causing cancer.

**Reproductive toxicity**

Suspected of damaging the unborn child.

**Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness.

**Specific target organ toxicity - repeated exposure**

Oral - Causes damage to organs through prolonged or repeated exposure. - Liver, Kidney

**Aspiration hazard**

No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Mixture

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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.

#### Components

##### Chloroform

|                   |                                                                                                      |
|-------------------|------------------------------------------------------------------------------------------------------|
| Toxicity to algae | static test ErC50 - Chlamydomonas reinhardtii (green algae) -<br>13.3 mg/l - 72 h<br>Remarks: (ECHA) |
|-------------------|------------------------------------------------------------------------------------------------------|

|                      |                 |
|----------------------|-----------------|
| Toxicity to bacteria | Remarks: (ECHA) |
|----------------------|-----------------|

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

#### DOT (US)

UN number: 1888    Class: 6.1    Packing group: III  
Proper shipping name: ChloroformSOLUTION

Reportable Quantity (RQ): 10 lbs  
Reportable Quantity (RQ): 10 lbs  
Poison Inhalation Hazard: No

#### IMDG

UN number: 1888    Class: 6.1    Packing group: III    EMS-No: F-A, S-A  
Proper shipping name: CHLOROFORMSOLUTION

**IATA**

UN number: 1888 Class: 6.1

Packing group: III

Proper shipping name: ChloroformSOLUTION

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**SECTION 15: Regulatory information**

Reportable Quantity : D022 lbs

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

Chloroform

CAS-No.  
67-66-3Revision Date  
2008-11-03

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**SECTION 16: Other information****Further information**

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