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## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

Product name : C20:4 ananadamide-d4

Product Number : 857465W

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.

P241

Use explosion-proof electrical/ ventilating/ lighting equipment.

|                    |   |
|--------------------|---|
| P242               | Use only non-sparking tools.  |
| P243               | Take precautionary measures against static discharge.   |
| P260               | Do not breathe dust/ fume/ gas/ mist/ vapours/ 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.   |
| P280               | Wear protective gloves/ eye protection/ face protection.  |
| P301 + P310 + P330 | IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.                                     |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.     |
| P304 + P340 + P311 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor. |
| P307 + P311        | IF exposed: Call a POISON CENTER or doctor/ physician.  |
| P362               | Take off contaminated clothing and wash before reuse.   |
| P370 + P378        | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.                    |
| P403 + P233        | Store in a well-ventilated place. Keep container tightly closed.  |
| P403 + P235        | Store in a well-ventilated place. Keep cool.  |
| 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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Synonyms : AEA-d4

Molecular weight : 32.04 g/mol

#### Hazardous components

| Component                                 | Classification  | Concentration |
|---|---|---------------|
| <b>Methanol</b>                           |   |               |
| CAS-No. 67-56-1                           | Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301 + H311 + H331, H370 | 90 - 100 %    |
| EC-No. 200-659-6                          |   |               |
| Index-No. 603-001-00-X                    |   |               |
| Registration number 01-2119433307-44-XXXX |   |               |

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

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### 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.

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### 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.

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### 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

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

##### Components with workplace control parameters

| Component | CAS-No. | Value  | Control parameters                 | Basis  |
|-----------|---------|--|------------------------------------|--|
| Methanol  | 67-56-1 | TWA  | 200.000000 ppm                     | USA. ACGIH Threshold Limit Values (TLV)  |
|           | Remarks | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)<br>Danger of cutaneous absorption |                                    |  |
|           |         | STEL   | 250.000000 ppm                     | USA. ACGIH Threshold Limit Values (TLV)  |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)<br>Danger of cutaneous absorption |                                    |  |
|           |         | TWA  | 200.000000 ppm<br>260.000000 mg/m3 | USA. NIOSH Recommended Exposure Limits   |
|           |         | Potential for dermal absorption  |                                    |  |
|           |         | ST   | 250.000000 ppm<br>325.000000 mg/m3 | USA. NIOSH Recommended Exposure Limits   |
|           |         | Potential for dermal absorption  |                                    |  |
|           |         | TWA  | 200.000000 ppm<br>260.000000 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
|           |         | The value in mg/m3 is approximate.   |                                    |  |
|           |         | TWA  | 200 ppm                            | USA. ACGIH Threshold Limit Values (TLV)  |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)<br>Danger of cutaneous absorption |                                    |  |
|           |         | STEL   | 250 ppm                            | USA. ACGIH Threshold Limit Values (TLV)  |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)<br>Danger of cutaneous absorption |                                    |  |
|           |         | TWA  | 200 ppm<br>260 mg/m3               | USA. NIOSH Recommended Exposure Limits   |
|           |         | Potential for dermal absorption  |                                    |  |

|  |  |                                    |                      |   |
|--|--|------------------------------------|----------------------|---|
|  |  | ST                                 | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended Exposure Limits  |
|  |  | Potential for dermal absorption    |                      |   |
|  |  | TWA                                | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants        |
|  |  | The value in mg/m3 is approximate. |                      |   |
|  |  | STEL                               | 250 ppm<br>325 mg/m3 | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                           |
|  |  | Skin notation                      |                      |   |
|  |  | TWA                                | 200 ppm<br>260 mg/m3 | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                           |
|  |  | Skin notation                      |                      |   |
|  |  | C                                  | 1,000 ppm            | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|  |  | Skin                               |                      |   |
|  |  | PEL                                | 200 ppm<br>260 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|  |  | Skin                               |                      |   |
|  |  | STEL                               | 250 ppm<br>325 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|  |  | Skin                               |                      |   |

#### Biological occupational exposure limits

| Component | CAS-No. | Parameters   | Value        | Biological specimen | Basis                                     |
|-----------|---------|--|--------------|---------------------|---|
|           | -       | Methanol   | 15.0000 mg/l | Urine               | ACGIH - Biological Exposure Indices (BEI) |
|           | Remarks | End of shift (As soon as possible after exposure ceases) |              |                     |   |
|           |         | Methanol   | 15 mg/l      | Urine               | ACGIH - Biological Exposure Indices (BEI) |
|           |         | End of shift (As soon as possible after exposure ceases) |              |                     |   |

## 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, 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 multi-purpose 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.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

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

- |   |  |
|---|--|
| a) Appearance                                   | Form: liquid<br>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 1                           |
| h) Evaporation rate                             | 6.3 - Diethylether1.9 - n-butyl acetate                                    |
| i) Flammability (solid, gas)                    | No data available  |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 36.5 %(V)<br>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/cm <sup>3</sup>   |
| 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 mm <sup>2</sup> /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      |

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## **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

Magnesium, zinc alloys, various plastics

#### 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

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### 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 on OSHA's list of regulated carcinogens.

##### 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 the:, Liver, Kidney

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

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## 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

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## 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.

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## 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

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## 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:

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

### SARA 311/312 Hazards

Fire Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

### Pennsylvania Right To Know Components



|          |                    |                             |
|----------|--------------------|-----------------------------|
| Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|----------|--------------------|-----------------------------|

|          |                    |                             |
|----------|--------------------|-----------------------------|
| Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|----------|--------------------|-----------------------------|

#### **New Jersey Right To Know Components**

|          |                    |                             |
|----------|--------------------|-----------------------------|
| Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|----------|--------------------|-----------------------------|

#### **California Prop. 65 Components**

|   |                    |                             |
|---|--------------------|-----------------------------|
| WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.<br>Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |
|---|--------------------|-----------------------------|

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## **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 + H331 | Toxic if swallowed, in contact with skin or if inhaled. |
| 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**

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