1. Product and Company Identification

Material name: UNIDYME™ 18

2. Hazards Identification

Emergency overview: After prolonged contact with highly porous materials, this product may spontaneously combust.

OSHA regulatory status: This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects:

- **Routes of exposure**: Eye contact. Skin contact. Inhalation.
- **Eyes**: Health injuries are not known or expected under normal use. Exposure to hot material may cause thermal burns.
- **Skin**: Health injuries are not known or expected under normal use. When it is heated, this material may cause thermal burns.
- **Inhalation**: Exposure to oil mist/fume/vapor may cause respiratory tract irritation.
- **Ingestion**: Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Non-hazardous components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimer Fatty Acid</td>
<td>61788-89-4</td>
<td>100</td>
</tr>
</tbody>
</table>

4. First Aid Measures

First aid procedures:

- **Eye contact**: Rinse with water. Get medical attention if irritation develops and persists. If hot product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately.
- **Skin contact**: Rinse skin with water/shower. Get medical attention if irritation develops and persists. If hot product contacts skin, cool under running water and get medical attention.
- **Inhalation**: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
- **Ingestion**: Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately. Do not induce vomiting without advice from poison control center.
- **General advice**: If you feel unwell, seek medical advice (show the label where possible).
5. Fire Fighting Measures

Flammable properties
Not flammable by OSHA criteria. Not combustible by OSHA criteria. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.

Extinguishing media
Suitable extinguishing media
Water spray, dry chemical, carbon dioxide.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters
Specific hazards arising from the chemical
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Protective equipment and precautions for firefighters
Wear suitable protective equipment.

Fire fighting equipment/instructions
Wear suitable protective equipment. Move containers from fire area if you can do so without risk.

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

Methods for containment
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Methods for cleaning up
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers.

Small Spills: Absorb spill with vermiculite or other inert material. Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling
Avoid inhalation of vapors and spray mists. In case of insufficient ventilation, wear suitable respiratory equipment. Observe good industrial hygiene practices. Follow all MSDS/label precautions even after container is emptied because they may retain product residues. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material. May auto-oxidize with sufficient heat generation to ignite if spread (as a thin film) or absorbed on porous or fibrous material. Contaminated rags and cloths must be put in fireproof containers for disposal.

Storage
Keep containers closed when not in use. Do not store in direct sunlight. Store at ambient temperature and atmospheric pressure. Keep away from heat, sparks and open flame.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimer Fatty Acid (61788-89-4)</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Oil Mist; Respirable</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Oil Mist; Respirable</td>
</tr>
</tbody>
</table>

U.S. - OSHA

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
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<tr>
<td>Dimer Fatty Acid (61788-89-4)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Oil Mist; Respirable</td>
</tr>
</tbody>
</table>

Personal protective equipment

Eye / face protection
Safety glasses.

Skin protection
Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Eye wash fountain and emergency showers are recommended. Launder contaminated clothing before reuse.

9. Physical & Chemical Properties

Appearance Liquid.

Physical state Liquid.

Form Liquid. Viscous.

Color Amber.

Odor Mild.

Odor threshold Not available.

pH Not available.

Vapor pressure < 0.0000001 kPa at 25°C

Vapor density Not available.

Boiling point > 392 °F (> 200 °C)

Melting point/Freezing point 10.4 - 0.4 °F (-12 - -18 °C)

Solubility (water) < 0.12 mg/L at 20°C; Data is for similar product.

Relative density 0.95 at 25°C/25°C; (water=1)

Flash point 550.40 °F (288.00 °C) Cleveland Open Cup

Flammability limits in air, upper, % by volume Not available.

Flammability limits in air, lower, % by volume Not available.

Auto-ignition temperature 505.4 °F (263 °C) Data is for similar product.

Evaporation rate 0 approx.; (n-BuAc=1)

Viscosity 1827 - 2255 mPa·s at 40°C

Percent volatile 0 % estimated

Partition coefficient (n-octanol/water) > 5

Other data

Chemical family Dimer Fatty Acid

Density 950.00 kg/m³ at 20°C

Flammability Non flammable.

Flammability class Not classified.

Surface tension 33.3 mN/m at 24°C

10. Chemical Stability & Reactivity Information

Chemical stability Material is stable under normal conditions.

Conditions to avoid Strong oxidizing agents. Heat, flames and sparks. Avoid temperatures exceeding the flash point. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.

Incompatible materials This product may react with strong oxidizing agents.

Hazardous decomposition products Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.

Possibility of hazardous reactions Hazardous polymerization does not occur.
### 11. Toxicological Information

#### Toxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimer Fatty Acid (61788-89-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Wistar rat</td>
<td>&gt; 5000 mg/kg, At this dose no death occurred.; OECD 401</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOAEL</td>
<td>Sprague-Dawley rat</td>
<td>1692 mg/kg/day, Developmental; OECD 421</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1450 mg/kg/day, Fertility; OECD 421</td>
</tr>
<tr>
<td><strong>Subchronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOAEL</td>
<td>Sprague-Dawley rat</td>
<td>741 mg/kg/day, 13 weeks, OECD 408</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

**Sensitization**

- Not classified.

**Skin sensitization**

- Dimer Fatty Acid: Maximisation Assay (Magnusson and Kligman), Not a skin sensitizer.; Data is for similar product.
- Result: Negative
- Species: Guinea pig
- Notes: OECD 406

**Acute effects**

- Not classified.

**Local effects**

- Fumes released during thermal processing may cause eye irritation. Thermal burn hazard - contact with hot material may cause thermal burns.

**Carcinogenicity**

- This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**Skin corrosion/irritation**

- Not classified.

**Corrosivity**

- Dimer Fatty Acid: Irritation Corrosion - Skin, No skin irritation.
- Result: Negative
- Species: New Zealand white rabbit
- Organ: Skin
- Notes: OECD 404

**Eye contact**

- Dimer Fatty Acid: Irritation Corrosion - Eye, No eye irritation.
- Result: Negative
- Species: New Zealand white rabbit
- Organ: Eye
- Notes: OECD 405

**Mutagenicity**

- Not classified.

**Mutagenicity**

- Dimer Fatty Acid: Germ Cell Mutagenicity: Ames, No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
- Result: Negative
- Species: Salmonella typhimurium
- Notes: EU Method B 13/14
- Germ Cell Mutagenicity: Chromosome Abberation
- Result: Negative
- Species: Human
- Notes: OECD 473
Mutagenicity

Dimer Fatty Acid

In vitro gene mutation study in mammalian cells. This material is considered to be non-clastogenic to human lymphocytes in vitro.

Result: Negative
Species: Mouse
Notes: OECD 476

Further information
This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimer Fatty Acid (61788-89-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EL50 Algae (Pseudokirchneriella subcapitata)</td>
<td>&gt; 1000 mg/l, 72 hr, OECD 201</td>
</tr>
<tr>
<td></td>
<td>NOEL Algae (Pseudokirchneriella subcapitata)</td>
<td>&gt; 1000 mg/l, 72 hr, OECD 201</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EL50 Daphnia</td>
<td>&gt; 1000 mg/l, 48 hr, OECD 202</td>
</tr>
<tr>
<td></td>
<td>NOEL Daphnia</td>
<td>&gt; 1000 mg/l, 48 hr, OECD 202</td>
</tr>
<tr>
<td>Aquatic</td>
<td>Fish LC50 Carp (Cyprinus carpio)</td>
<td>&gt; 350 mg/l, 96 hr, OECD 203</td>
</tr>
<tr>
<td></td>
<td>NOEC Danio (Danio)</td>
<td>850 µg/l, 28 d, Data is for similar product.; ISO/DIS 10229-1</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Ecotoxicity
Not expected to be harmful to aquatic organisms.

Environmental effects
Not classified as an environmental hazard.

Persistence and degradability
The product is not readily biodegradable.

Photolysis
Not available.

Hydrolysis
Not available.

Biodegradability
Not available.

Bioaccumulation / Accumulation

Bioaccumulative potential
Octanol/water partition coefficient log Kow

<table>
<thead>
<tr>
<th>Component</th>
<th>log Kow</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIDYME™ 18</td>
<td>&gt; 5 LogKow</td>
</tr>
<tr>
<td>Dimer Fatty Acid</td>
<td>&gt; 5</td>
</tr>
</tbody>
</table>

Partition coefficient

<table>
<thead>
<tr>
<th>Component</th>
<th>log Kow</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIDYME™ 18</td>
<td>&gt; 5 LogKow</td>
</tr>
<tr>
<td>Dimer Fatty Acid</td>
<td>&gt; 5</td>
</tr>
</tbody>
</table>

Mobility in environmental media
The product has poor water-solubility.

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adsorption</td>
<td>Not available.</td>
</tr>
<tr>
<td>Desorption</td>
<td>Not available.</td>
</tr>
<tr>
<td>Volatility</td>
<td>Not available.</td>
</tr>
<tr>
<td>Distribution</td>
<td>Not available.</td>
</tr>
<tr>
<td>Adsorption</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
13. Disposal Considerations

Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2)
Not regulated.

DEA Essential Chemical Code Number
Not regulated.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
Not regulated.

DEA Exempt Chemical Mixtures Code Number
Not regulated.

CERCLA (Superfund) reportable quantity
None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance
No

Section 311 hazardous chemical
No

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Country(s) or region | Inventory name | On inventory (yes/no)*
--- | --- | ---
Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes
United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

### 16. Other Information

**Further information**

HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**

- Health: 1
- Flammability: 1
- Physical hazard: 0

**NFPA ratings**

- Health: 1
- Flammability: 1
- Instability: 0

**Disclaimer**

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**Issue date**

05-09-2012

**List of abbreviations**

Not available.