Safety Data Sheet: Okadaic acid

Section 1. Identification of the substance/mixture and of the Company

Product identifiers
- **Product name**: Okadaic acid
- **Product Code**: OA
- **CAS #**: 78111-17-8
- **EC Number #**: 616-589-8
- **Formula**: C\(_{44}\)H\(_{68}\)O\(_{13}\)
- **RTECS**: AA8227800
- **Molecular weight**: 805

Intended uses of the substance or mixture and uses advised against
- **Intended use**: Only for Research and/or Development
- **Uses advised against**: Not for drug, Not to be used in humans or animals, Not food additive

Details of the supplier of the safety data sheet
- **FERMENTEK ltd**
  - 4 Yatziv street, POB 47120
  - Jerusalem 97800, Israel
- **Tel**: +972 2 5853953
- **Fax**: +972 2 5853943
- **eMail**: fermentek@fermentek.com
- **Website**: www.fermentek.com
- **For chemical emergency spill, leak, fire, exposure, or accident calls CHEMTREC day or night:**
  - Within USA and Canada: 1-800-424-9300. Outside USA and Canada: +1 703-527-3887
- **This company is the manufacturer of the product, and the supplier of the safety data sheet**

Reach: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

Section 2. Hazards identification

Classification of the substance or mixture

**GHS Classification:**
- Acute toxicity - Oral: Category 3, H301, Toxic if swallowed
- Acute toxicity - Inhalation: Category 3, H331, Toxic if inhaled
- Acute toxicity - Dermal: Category 3, H311, Toxic if in contact with skin
- Skin irritation -: Category 2, H315, Causes skin irritation

**GHS Label elements, including precautionary statements**
- **Signal word**: danger
- **Pictogram**: { }  
- **Hazard statements**
  - H301 + H311 + H331: Toxic if swallowed, in contact with skin or if inhaled
  - H315: Causes skin irritation
- **Precautionary statements**
  - P280: Wear protective gloves/ protective clothing
  - P302 + P352: IF ON SKIN: Wash with plenty of soap and water
  - P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  - P308 + P310: IF exposed or concerned: immediately call a POISON CENTER or doctor/physician

Section 3. Composition/information on ingredients

**Substance**

| Substance name | Okadaic acid |
Section 4.  **First Aid Measures**

**Description of First Aid Measures**

**General advice:** First aider needs to protect himself.

**Self-protection of the first aider:** Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**Inhalation:** Immediate medical attention is required. If breathing stops, immediately apply artificial respiration, if necessary also oxygen. Call a physician immediately.

**Eye contact:** Wash with plenty of water.

**Skin Contact:** Take off immediately all contaminated clothing. Rinse skin with soap and water or shower. Call a physician immediately.

**Ingestion:** If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

Section 5.  **Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable extinguishing media** None

**Hazardous combustion products** Carbon oxides, Nitrogen oxides.

**Advice for firefighters** Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit.

Section 6.  **Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

**Methods and material for containment and cleaning up**

**Methods for containment:** Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up:** Cover liquid spill with sand, earth or other non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, and vermiculite). Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal.
Section 7.  **Handling and storage**

**Precautions for safe handling**

Advice on safe handling: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place.

Keep out of the reach of children.

Store at -20 °C, Protect from sunlight. Protect from moisture

Incompatible materials: None known based on information available.

Section 8.  **Exposure Controls/Personal Protection**

No occupational exposure limits are listed for this material.

OSHA Permissible Exposure Limits  No Data Available

NIOSH Recommended Exposure Limits  No Data Available

ACGIH Threshold Limit Values  No Data Available

**Exposure controls**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Appropriate engineering controls**

Engineering Controls  Showers, Eyewash stations, Ventilation systems

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Use fumehood for routine work.

**Personal protective equipment**

The employer/end user, prior to use of this product should perform all recommendations below are advisory in nature and a risk assessment. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.

**General Hygiene Considerations**  Handle in accordance with good industrial hygiene and safety practice.

[PPE=Personal Protection Equipment]

**PPE**

Eye/face protection  Wear safety glasses with side shields (or goggles).

Skin and Body Protection  Wear protective gloves and protective clothing.

Respiratory Protection  If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations.

Respiratory protection must be provided in accordance with current local regulations.

Section 9.  **Physical and chemical properties**

**Physical / chemical properties**

<table>
<thead>
<tr>
<th>Physical State at room temperature</th>
<th>Solid / powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td><strong>Melting/freezing point</strong></td>
<td>185°C –195°C</td>
</tr>
</tbody>
</table>

No further safety relevant data are available
Section 10. Stability and reactivity

| Reactivity: | No information available. |
| Chemical stability: | Stable under normal conditions. |
| Conditions to avoid | Heat, flames and sparks. Sunlight. |
| Incompatible materials | Strong reducers and oxidizers |
| Possibility of Hazardous Reactions | None under normal processing |
| Hazardous decomposition products: | Carbon oxides, Nitrogen oxides |

Section 11. Toxicological information

Information on toxicological effects

The toxicological effects of this product have not been thoroughly studied.

<table>
<thead>
<tr>
<th>Acute Toxicity</th>
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</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>Estimated LD50 oral, 100 mg/kg,</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Estimated LC50 Inhal, 0.6 mg/l; 4 h; dust/mist;</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation:</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation:</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitization:</td>
<td>No data available</td>
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<tr>
<td>Germ cell mutagenicity:</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproductive toxicity / Teratogenicity:</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard:</td>
<td>No data available</td>
</tr>
<tr>
<td>Additional information:</td>
<td>RTECS: AA8227800</td>
</tr>
</tbody>
</table>

Section 12. Ecological Information

Toxicity | No data available
PBT and vPvB assessment | No data available
Environmental hazards | This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.

Section 13. Disposal Considerations

<table>
<thead>
<tr>
<th>Waste treatment methods</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste from residues / unused products</td>
<td>Dispose of in accordance with local regulations</td>
</tr>
<tr>
<td>Contaminated packaging</td>
<td>Dispose of as unused product</td>
</tr>
</tbody>
</table>

Section 14. Transport information

<table>
<thead>
<tr>
<th>UN number, Proper Shipping Name, Transport Hazard Class, packing group</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>UN Number</td>
<td>UN 3462 Toxins extracted from living sources, n.o.s. (Okadaic acid)</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>UN 3462 Toxins extracted from living sources, n.o.s. (Okadaic acid)</td>
</tr>
<tr>
<td>Transport Hazard Class &amp; Packing Group</td>
<td>6.1 Pg III</td>
</tr>
<tr>
<td></td>
<td>6.1 Pg III</td>
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<td>6.1 Pg III</td>
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<td>6.1 Pg III</td>
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</table>

Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Safety, health and environmental regulations/legislation</th>
<th></th>
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<tbody>
<tr>
<td>USA EPA / TSCA</td>
<td>This product is not listed on the USA EPA TSCA</td>
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</table>
Section 16. **Other information**

**Date of revision:** 28 May 2017

**Disclaimer**
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given here is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

**End of SDS**