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

1.1. Product identifier

Product No 5934
Product name Okadaic Acid
Reach registration number This substance/mixture contains only ingredients which have been registered, or are exempt from registration, according to Regulation (EC) No. 1907/2006.

Contains

Chemical Name 9,10-Deepithio-9,10-didehydroacanthifolicin (90 - Not Listed 100%)
Index No. Not Listed
CAS No 78111-17-8

Formula C_{68}H_{108}O_{13}
Molecular Weight 805.00 g/mol

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

Identified uses For research use only

1.3. Details of the supplier of the safety data sheet

Importer (Applicable in EU only) Cell Signaling Technology Europe B.V.
Schafterveld 2
2316 ZA Leiden
The Netherlands
TEL: +31 (0)71 7200 200
FAX: +31 (0)71 891 0098
Website www.cellsignal.com
E-mail Address info@cellsignal.eu

Manufacturer Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400

1.4. Emergency telephone number

CHEMTREC 24 hours a day, 7 days a week, 365 days a year
+1 703 527 3887 (INTERNATIONAL) +1 800 424 9300 (NORTH AMERICA)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Acute oral toxicity Category 3 - (H301)
Acute dermal toxicity Category 3 - (H311)
2.2. Label elements

Signal word
Danger

Hazard statement(s)
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H331 - Toxic if inhaled

Precautionary statement(s)
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed 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 and protective clothing
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
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
P312 - Call a POISON CENTER or doctor if you feel unwell
P330 - Rinse mouth
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P361 + P364 - Take off immediately all contaminated clothing and wash it 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. Other hazards

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms
Okadaic acid;
Acanthifolicin, 9,10-deepithio-9,10-didehydro-
UNII-1W21G5Q4N2

Formula
C₄₄H₆₈O₁₃

Chemical nature
Monoconstituent substance.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
<th>EC No</th>
<th>Classification (1272/2008)</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,10-Deepithio-9,10-didehydroacanthifolicin</td>
<td>78111-17-8</td>
<td>100</td>
<td>-</td>
<td>Acute Tox. 3 (H301) Acute Tox. 3 (H311)</td>
<td>no data available</td>
</tr>
</tbody>
</table>
4.1. Description of first aid measures

General advice
Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. If symptoms persist, call a physician.

Inhalation
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediate medical attention is required. If not breathing, give artificial respiration.

Skin contact
Immediate medical attention is required. Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use.

Eye contact
Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

Ingestion
Immediate medical attention is required. Never give anything by mouth to an unconscious person. Clean mouth with water. Drink plenty of water. Do not induce vomiting without medical advice. Consult a physician.

Protection of first-aiders
Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2. Most important symptoms and effects, both acute and delayed


4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.
6.3. Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so.
Methods for cleaning up
Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid dust formation. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges.

6.4. Reference to other sections
See Sections 8 & 13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

7.2. Conditions for safe storage, including any incompatibilities
Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

7.3. Specific end use(s)
Use as a laboratory reagent.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls
Appropriate engineering controls
Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment
Eye/face protection
Tightly fitting safety goggles
Skin protection
Hand protection
Impervious gloves.
Other
Impervious gloves. Impervious clothing. Long sleeved clothing.
Respiratory protection
In case of inadequate ventilation wear respiratory protection.

Environmental Exposure Controls
No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Crystalline Powder</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
</tbody>
</table>
### Property | Values | Remarks • Method
---|---|---
PH | | No information available
Melting point/freezing point | 164-175 °C | No information available
Initial boiling point and boiling range | | No information available
Flash point | | No information available
Evaporation rate | | No information available
Flammability (solid, gas) | | No information available
Upper flammability limit | | No information available
Lower flammability limit | | No information available
Vapor pressure | | No information available
Vapor density | | No information available
Relative density | | No information available
Solubility | | No information available
Partition coefficient: n-octanol/water | | No information available
Autoignition temperature | | No information available
Decomposition temperature | | No information available.
Viscosity | | No information available
Explosive properties | | No information available
Oxidizing properties | | No information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No information available.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

- **Hazardous polymerization**: Hazardous polymerization does not occur.
- **Hazardous reactions**: None under normal processing.

#### 10.4. Conditions to avoid

None known based on information supplied.

#### 10.5. Incompatible materials

No information available.

#### 10.6. Hazardous decomposition products

None under normal use conditions.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.
Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Toxic by inhalation.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>There is no data available for this product.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Irritating to skin. Toxic in contact with skin.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Toxic if swallowed.</td>
</tr>
</tbody>
</table>

Symptoms


Skin corrosion/irritation

Irritating to skin.

Serious eye damage/eye irritation

No information available.

Sensitization

No information available.

Mutagenic effects

No information available.

Carcinogenic effects

Laboratory experiments on animals have reported the development of tumors.

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration Hazard

No information available.

Other information

No information available.

SECTION 12: Ecological information

12.1. Toxicity

No information available.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Bioaccumulation

No information available.

Bioconcentration factor (BCF)

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products

Dispose of in accordance with local regulations.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IMDG/IMO
14.1 UN number UN3462
14.2 UN proper shipping name Toxins, extracted from living sources, solid, n.o.s. (Okadaic acid)
14.3 Transport hazard class(es) 6.1
14.4 Packing group II
14.5 Environmental hazards None
14.6 Special precautions for user EmS No. F-A, S-A
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not regulated

ADR/RID
14.1 UN number UN3462
14.2 UN proper shipping name Toxins, extracted from living sources, solid, n.o.s. (Okadaic acid)
14.3 Transport hazard class(es) 6.1
14.4 Packing group II
14.5 Environmental hazards None
14.6 Special precautions for user Classification Code T2
   Tunnel Restriction Code (D/E)

IATA
14.1 UN number UN3462
14.2 UN proper shipping name Toxins, extracted from living sources, solid, n.o.s. (Okadaic acid)
14.3 Transport hazard class(es) 6.1
14.4 Packing group II
14.5 Environmental hazards None
14.6 Special precautions for user Special provisions A3, A43

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Candidate List of Substances of Very High Concern for Authorization Information
This product does not contain Substances of Very High Concern (SVHC).

SEVESO Directive Information
This product does not contain substances identified in the SEVESO Directive.

International inventories
TSCA 8(b) -
DSL/NDSL -
EINECS/ELINCS -
ENCS -
IECSC - Complies
KECL -
PICCS -
AICS -

International inventories legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
5934 Okadaic Acid

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment
For this substance a chemical safety assessment has not been carried out

SECTION 16: Other information

Full text of H-Statements referred to under Sections 2 and 3
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H315 - Causes skin irritation

Classification procedure: Expert judgment and weight of evidence determination.
Issuing Date: 2015-04-27
Revision Date: 2018-03-14

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 is designed only as a 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.