Safety Data Sheet (SDS) According to the REACH Regulation (EC) No. 1907/2006

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

1.1. Product identifier

Product No: 9950
Product name: Trichostatin A (TSA)

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

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.
Dellaertweg 9b
2316 WZ Leiden
The Netherlands
TEL: +31 (0)71 7200 200
FAX: +31 (0)71 891 0019
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)

Europe: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

<table>
<thead>
<tr>
<th>Hazard Classifications</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 4 - (H302)</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>Category 4 - (H312)</td>
</tr>
<tr>
<td>Acute inhalation toxicity</td>
<td>Category 4 - (H332)</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2 - (H315)</td>
</tr>
</tbody>
</table>
2.2. Label elements

Signal word
Warning

Hazard statement(s)
H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

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
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
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
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER or doctor if you feel unwell
P330 - Rinse mouth
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P337 + P313 - If eye irritation persists: Get medical advice/attention
P362 + P364 - Take off 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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
<th>EC No</th>
<th>Classification</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Heptadienamide, 7-(4-(dimethylamino)phenyl)-N-hydroxy-4,6-dimethyl-7-oxo-</td>
<td>58880-19-6</td>
<td>100</td>
<td>611-758-2</td>
<td>-</td>
<td>no data available</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Use first aid treatment according to the nature of the injury. When symptoms persist or in all cases of doubt seek medical advice.

Inhalation Move to fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion Rinse mouth. Consult a physician. Never give anything by mouth to an unconscious person.

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

No information available.

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 Dry chemical. Foam. Carbon dioxide (CO₂). Water spray.

Unsuitable Extinguishing Media No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of toxic and corrosive gases/vapors. Carbon oxides. Nitrogen oxides (NOx).

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 Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

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 Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

See Sections 8 & 13 for additional information.

SECTION 7: Handling and storage
7.1. Precautions for safe handling

Wear personal protective equipment. Avoid dust formation in confined areas. Wash thoroughly after handling. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

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

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 Safety glasses with side-shields
Skin protection
   Hand protection Impervious gloves.
   Other Wear suitable protective 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>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
<td>No information available</td>
</tr>
<tr>
<td>Appearance</td>
<td>Lyophilized Powder</td>
<td>No information available</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9950 Trichostatin A (TSA)

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
Oxidizing agents.

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</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause irritation of respiratory tract.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Irritating to eyes.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

Symptoms

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>Repeated or prolonged contact may cause allergic reactions in very susceptible persons.</td>
</tr>
<tr>
<td>Mutagenic effects</td>
<td>No information available.</td>
</tr>
<tr>
<td>Carcinogenic effects</td>
<td>No information available.</td>
</tr>
</tbody>
</table>
9950 Trichostatin A (TSA)

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.

Unknown Aquatic Toxicity  0% of the mixture consists of components of unknown hazards to the aquatic environment.

12.2. Persistence and degradability
No information available.

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Bioaccumulation</th>
<th>No information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioconcentration factor (BCF)</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

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.
Other information  Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IMDG/IMO

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>None</td>
</tr>
<tr>
<td>14.6 Special precautions for user</td>
<td>None</td>
</tr>
<tr>
<td>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

14.1 UN number  Not regulated
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

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA (8b)</td>
<td>-</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>-</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>-</td>
</tr>
<tr>
<td>ENCS</td>
<td>-</td>
</tr>
<tr>
<td>IECSC</td>
<td>-</td>
</tr>
<tr>
<td>KECL</td>
<td>-</td>
</tr>
<tr>
<td>PICCS</td>
<td>-</td>
</tr>
<tr>
<td>AICS</td>
<td>-</td>
</tr>
</tbody>
</table>

International inventories legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
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

H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Classification procedure: Expert judgment and weight of evidence determination.

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.