

**Safety Data Sheet (SDS)** According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

**Issuing Date:** 2014-03-14

**Revision Date:** 2024-02-23

**Version:** 3

## SECTION 1. Identification

**Product identifier**

**Product No** 12520  
**Product name** Vorinostat (SAHA)  
**UN number** UN3077  
**Other means of identification** 12520S

**Recommended use of the chemical and restrictions on use**

**Identified uses** For Research Use Only. Not for Use in Diagnostic Procedures.

**Manufacturer, importer, supplier**

**Manufacturer address** Cell Signaling Technology, Inc.  
 3 Trask Lane  
 Danvers, MA 01923  
 United States  
 TEL: +1 978 867 2300  
 FAX: +1 978 867 2400  
**Website** www.cellsignal.com  
**Email address** support@cellsignal.com  
**Emergency telephone number** In case of emergency call CHEMTREC 1-800-424-9300

## SECTION 2. Hazard(s) identification

**Classification**

This substance/mixture is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<b>Germ cell mutagenicity</b>	Category 2
<b>Reproductive toxicity</b>	Category 1B
<b>Acute aquatic toxicity</b>	Category 1

**GHS Label elements, including precautionary statements**



**Signal Word**  
 Danger.

**Hazard statement(s)**

Suspected of causing genetic defects.  
May damage fertility or the unborn child.  
Very toxic to aquatic life.

**Precautionary Statement(s)**

Obtain special instructions before use.  
Use personal protective equipment as required.  
Wear protective gloves/eye protection/face protection.  
Avoid release to the environment.  
Collect spillage.  
IF exposed or concerned: Get medical advice/attention.  
Store locked up.  
Dispose of contents/container to an approved waste disposal plant.

**Supplementary Hazard Information****Hazards not otherwise classified (HNOC)**

Very toxic to aquatic life.

**Unknown Acute Toxicity** 100% of the mixture consists of ingredient(s) of unknown acute toxicity

<b>SECTION 3. Composition/information on ingredients</b>
--

<b>Formula</b>	C <sub>14</sub> H <sub>20</sub> N <sub>2</sub> O <sub>3</sub>
<b>Molecular Weight</b>	264.32
<b>Chemical nature</b>	Monoconstituent substance
<b>Synonyms</b>	Vorinostat; N-Hydroxy-N'-phenyloctanediamide; Suberanihydroxamic acid; Octanediamide, N-hydroxy-N'-phenyl-; Zolinza

Chemical name	CAS No	Weight-%
N-hydroxy-N'-phenyloctanediamide	149647-78-9	60-100

<b>SECTION 4. First-aid measures</b>
--------------------------------------

<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Inhalation</b>	Move to fresh air.
<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water.

**Most important symptoms and effects, both acute and delayed**

Diarrhea, nausea, anorexia, weight decrease, vomiting, constipation, fatigue, chills, thrombocytopenia, anemia, dysgeusia and dry mouth.

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**Advice for emergency responders**

<b>General advice</b>	For further assistance, contact your local Poison Control Center.
<b>Protection of first-aiders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves

## SECTION 5. Fire-fighting measures

### Extinguishing media

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

### Specific hazards arising from the chemical

No information available.

### Explosion Data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** Ensure adequate ventilation.

**Other information** No information available.

### Environmental precautions

Do not flush into surface water or sanitary sewer system.

### 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.

## SECTION 7. Handling and storage

### Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

**Technical measures/Storage conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Packaging material** No information available.

**Incompatible products** None known based on information supplied.

## SECTION 8. Exposure controls/personal protection

### Control parameters

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

---

specific regulatory bodies.

### Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

### Individual protection measures, such as personal protective equipment

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

<b>Eye/face protection</b>	Safety glasses with side-shields
<b>Skin and body protection</b>	Wear protective gloves/clothing.
<b>Respiratory protection</b>	In case of inadequate ventilation wear respiratory protection.
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Solid
<b>Appearance</b>	Crystalline Powder
<b>Color</b>	White to off-white
<b>Odor</b>	No information available
<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks Method</u>
<b>pH</b>	6.6	saturated water solution ( 9.2 pKa)
<b>Melting point/freezing point</b>	151-163 °C	
<b>Boiling point or initial boiling point and boiling range</b>	No information available	
<b>Flash point</b>	No information available	-
<b>Evaporation rate</b>	No information available	
<b>Flammability</b>	No information available	
<b>Lower explosion limit</b>	No information available	
<b>Upper explosion limit</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Relative vapor density</b>	No information available	
<b>Density and/or relative density</b>	No information available	
<b>Solubility</b>	Practically insoluble	
<b>Solubility in other solvents</b>	No information available.	mg/mL in Dimethyl sulfoxide (DMSO); soluble in Ethanol (EtOH) @ 2 mg/mL with slight warming.
<b>Partition coefficient: n-octanol/water</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Viscosity</b>	No information available	
<b>Viscosity, dynamic</b>	No information available	
<b><u>Other information</u></b>		
<b>Softening point</b>	No information available	
<b>Molecular Weight</b>	264.32	
<b>VOC content</b>	No information available	
<b>Liquid Density</b>	No information available	
<b>Bulk density</b>	No information available	

## SECTION 10. Stability and reactivity

### Reactivity

No information available.

#### **Chemical stability**

Stable under recommended storage conditions.

#### **Possibility of hazardous reactions**

<b>Hazardous reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	None under normal processing.

#### **Conditions to Avoid**

No information available.

#### **Incompatible Materials**

None known based on information supplied.

#### **Hazardous Decomposition Products**

None known based on information supplied

## **SECTION 11. Toxicological information**

#### **Information on likely routes of exposure**

<b>Inhalation</b>	There is no data available for this product.
<b>Eye contact</b>	There is no data available for this product.
<b>Skin contact</b>	There is no data available for this product.
<b>Ingestion</b>	There is no data available for this product.

#### **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.

**Unknown Acute Toxicity** 100% of the mixture consists of ingredient(s) of unknown acute toxicity.

#### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Symptoms</b>	Diarrhea, nausea, anorexia, weight decrease, vomiting, constipation, fatigue, chills, thrombocytopenia, anemia, dysgeusia and dry mouth.
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	Mutagenic in vitro in the bacterial reverse mutation assays (AMES test). Genotoxic in some animal in vitro and in vivo studies.
<b>Carcinogenicity</b>	No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA. Experiments have shown reproductive toxicity effects on laboratory animals.
<b>Reproductive toxicity</b>	May be a developmental hazard based on animal data
<b>Developmental toxicity</b>	
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Neurological effects</b>	No information available.
<b>Aspiration Hazard</b>	No information available.

## SECTION 12. Ecological information

### Ecotoxicity

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
N-hydroxy-N'-phenyloctanediamide	EC50 0.080 mg/l (Selenastrum capricornutum) 96 h	LC50 10 mg/l (Sheepshead minnow) 96 h	LC50 7.4 mg/l (Mysidopsis juniae) 96 h

**Persistence and degradability** No information available  
**Mobility** No information available  
**Bioaccumulation** No information available.

### Other adverse effects

No information available.

## SECTION 13. Disposal considerations

### Waste Disposal Methods

Dispose of in accordance with all applicable national environmental laws and regulations.

### Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way. Dispose of wastes in an approved waste disposal facility.

## SECTION 14. Transport information

### DOT

**UN number** UN3077  
**UN proper shipping name** Environmentally hazardous substance, solid, n.o.s. (N-hydroxy-N'-phenyloctanediamide)  
**Transport hazard class(es)** 9  
**Packing group** III

### IATA

**UN number** UN3077  
**UN proper shipping name** Environmentally hazardous substance, solid, n.o.s. (N-hydroxy-N'-phenyloctanediamide)  
**Transport hazard class(es)** 9  
**Packing group** III

## SECTION 15. Regulatory information

### North American Inventory Listing

This product contains a chemical or chemicals included in the Toxic Substances Control Act (TSCA) Chemical Substance Inventory, Domestic Substances List (DSL) and/or Non-Domestic Substances List (NDSL):

Chemical name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
N-hydroxy-N'-phenyloctanediamide	Not Listed	Not Listed	Not Listed	Not Listed

ide				
-----	--	--	--	--

### **Canadian Workplace Hazardous Materials Information System (WHMIS) Classification**

This product does not meet the criteria for classification under the Hazardous Products Act.

### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

### **SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	No
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

### **Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### **U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

### **U.S. FIFRA Label Information**

This product does not contain any substances regulated as pesticides.

### **US Commerce Department - Export Administration Regulations Information**

This product does not contain any substances regulated under the Chemical Weapons Convention (CWC).

### **U.S. Drug Enforcement Administration Information**

This product does not contain any substances regulated under the DEA.

## **SECTION 16. Other information**

**Issuing Date:** 2014-03-14

**Revision Date:** 2024-02-23

### **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.

End of Safety Data Sheet