

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

**Issuing Date:** 2014-08-04

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**Version:** 2

## SECTION 1. Identification

### Product identifier

**Product No** 14240  
**Product name** Perifosine  
**Other means of identification** 14240S, 14240L

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

**Identified uses** This product is intended for research purposes only.

### 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>Acute oral toxicity</b>	Category 4
<b>Reproductive toxicity</b>	Category 1B
<b>Effects on or via lactation</b>	Effects on or via lactation
<b>Specific target organ toxicity - repeated exposure (STOT RE)</b>	Category 1

### GHS Label elements, including precautionary statements



**Signal Word**  
 Danger

### **Hazard statement(s)**

Harmful if swallowed. May damage fertility or the unborn child. May cause harm to breast-fed children. Causes damage to organs

(kidneys, reproductive organs, spleen, pituitary, haematopoietic tissue) through prolonged or repeated exposure (ingestion).

**Precautionary Statement(s)**

Obtain special instructions before use. Avoid contact during pregnancy/while nursing. Wash face, hands and any exposed skin thoroughly after handling. Use personal protective equipment as required.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

**Supplementary Hazard Information**

No information available.

**Hazards not otherwise classified (HNOC)**

Not applicable.

**SECTION 3. Composition/information on ingredients**

<b>Formula</b>	C <sub>25</sub> H <sub>25</sub> NO <sub>4</sub> P
<b>Molecular Weight</b>	461.66 g/mol
<b>Chemical nature</b>	Monoconstituent substance
<b>Synonyms</b>	Perifosine; KRX-0401; NKA17; NSC-639966; Piperidinium, 4-((hydroxy(octadecyloxy)phosphinyl)oxy)-1,1-dimethyl-, inner salt; 1,1-Dimethylpiperidin-1-ium-4-yl octadecyl phosphate

Chemical Name	CAS No	Weight %
(1,1-dimethylpiperidin-1-ium-4-yl) octadecyl phosphate	157716-52-4	100

**SECTION 4. First-aid measures**

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

Ingestion may result in nausea, vomiting, diarrhea and fatigue. Less commonly; anemia, infection, muscle weakness, pain, anorexia, dehydration and ileus (partial or complete blockage of the bowel).

**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**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	CAUTION: Use of water spray when fighting fire may be inefficient.

**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**

See Section 12 for additional information.

### **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** Pick up and transfer to properly labeled containers.

## **SECTION 7. Handling and storage**

### **Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice.

### **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**

### **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.

**Eye/face protection** Safety glasses with side-shields.

**Skin and body protection** Wear protective gloves/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

**Hygiene measures**

provided in accordance with current local regulations.  
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>Color</b>	White
<b>Appearance</b>	Crystalline powder	<b>Odor Threshold</b>	No information available
<b>Odor</b>	No information available		
<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks</u></b>	<b><u>Method</u></b>
<b>pH</b>	5.8		@ 0.2 g/L in water
<b>Melting point/freezing point</b>	270 °C		
<b>Initial boiling point and boiling range</b>			
<b>Flash point</b>			
<b>Evaporation rate</b>	No information available		
<b>Flammability (solid, gas)</b>	No information available		
<b>Upper flammability limit</b>	No information available		
<b>Lower flammability limit</b>	No information available		
<b>Vapor pressure</b>	No information available		
<b>Vapor density</b>	No information available		
<b>Relative density</b>	No information available		
<b>Solubility</b>	Soluble in water @ 50 mg/mL	With warming	
<b>Solubility in other solvents</b>	No information available.		
<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>Explosive properties</b>	No information available		
<b>Oxidizing properties</b>	No information available		
<b><u>Other information</u></b>			
<b>Softening point</b>	No information available		
<b>Molecular Weight</b>	461.66 g/mol		
<b>VOC content</b>	No information available		
<b>Density</b>	No information available.		
<b>Bulk Density VALUE</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>	Harmful if swallowed.

#### **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.

<b>Chemical Name</b>	<b>LD50 Oral</b>	<b>LD50 Dermal</b>	<b>LC50 Inhalation</b>
(1,1-dimethylpiperidin-1-ium-4-yl) octadecyl phosphate	649 mg/kg ( Rat )	-	-

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

<b>Symptoms</b>	Ingestion may result in nausea, vomiting, diarrhea and fatigue. Less commonly; anemia, infection, muscle weakness, pain, anorexia, dehydration and ileus (partial or complete blockage of the bowel).
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	Negative in the mouse micronucleus test. Negative in the Ames test.
<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.
<b>Reproductive toxicity</b>	Rat (male) oral : Toxic effects on reproduction @ 8.25 mg/kg Rat (female) oral : Toxic effects on reproduction and the foetus @ 3.16 mg/kg.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	NOEL Rat Oral < 2.15 mg/kg 13 weeks (OECD 407). Causes damage to organs through prolonged or repeated exposure: Kidney, Reproductive organs, Spleen, Pituitary, Haematopoietic tissue.
<b>Neurological effects</b>	No information available.
<b>Aspiration Hazard</b>	No information available.

### **SECTION 12. Ecological information**

#### **Ecotoxicity**

<b>Persistence and degradability</b>	Subject to slight degradation (28 Day - OECD 301E).
<b>Bioaccumulation</b>	No information available.
<b>Mobility</b>	No information available

#### **Other adverse effects**

Bacterial Toxicity: EC10 = 0.45 mg/L (Pseudomonas putida) 16 h (DIN 38412).

### **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.

<b>SECTION 14. Transport information</b>
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This material is not subject to regulation as a hazardous material for shipping.

<b>SECTION 15. Regulatory information</b>
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**North American Inventory Listing**

Chemical Name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
(1,1-dimethylpiperidin-1-ium-4-yl) octadecyl phosphate	Not Listed	Not Listed	Not Listed	Not Listed

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

(Bad file name)	Class D2A - Very Toxic Material at >= 0.1%
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**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**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	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**

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**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