

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

**Issuing Date:** 2015-01-20

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**Version:** 3

## SECTION 1. Identification

### Product identifier

**Product No** 2200  
**Product name** Etoposide

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

**Identified uses** For research use 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>Germ cell mutagenicity</b>	Category 1B
<b>Carcinogenicity</b>	Category 1A
<b>Reproductive toxicity</b>	Category 1B

### GHS Label elements, including precautionary statements



**Signal Word**  
 Danger.



**Hazard statement(s)**

Harmful if swallowed.  
May cause genetic defects.  
May cause cancer.  
May damage fertility or the unborn child.

**Precautionary Statement(s)**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wash face, hands and any exposed skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF exposed or concerned: Get medical advice/attention.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.  
Store locked up.  
Dispose of contents/container to an approved waste disposal plant.

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

Avoid contact during pregnancy and while nursing.

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

**Formula**  $C_{29}H_{32}O_{13}$   
**Molecular Weight** 588.56 g/mol  
**Chemical nature** Monoconstituent substance

Chemical name	CAS No	Weight-%
etoposide	33419-42-0	100

**SECTION 4. First-aid measures**

**Eye contact** Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. Call a physician if irritation persists.

**Skin contact** Wash off immediately with soap and plenty of water for at least 15 minutes. If skin irritation occurs, get medical advice/attention.

**Inhalation** Move to fresh air. Call a doctor if you feel unwell.

**Ingestion** Clean mouth with water and afterwards drink plenty of water. Get medical attention if symptoms occur.

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

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

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

Treat symptomatically.

**Advice for emergency responders**

**General advice** Show this safety data sheet to the doctor in attendance.  
**Protection of first-aiders** Use personal protective equipment. Avoid contact with skin, eyes and clothing.



## SECTION 5. Fire-fighting measures

### Extinguishing media

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray. Foam. Dry powder. Carbon dioxide (CO<sub>2</sub>).

### Specific hazards arising from the chemical

No information available.

**Hazardous Combustion Products** Carbon oxides (CO<sub>x</sub>).

### 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** Evacuate personnel to safe areas. Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wash thoroughly after handling.

**Other information** No information available.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water 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. Avoid dust formation. Pick up and transfer to properly labeled containers. Keep in suitable, closed containers for disposal. Clean contaminated surface thoroughly.

## SECTION 7. Handling and storage

### Precautions for safe handling

Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear personal protective equipment. Do not breathe dust. Avoid contact during pregnancy/while nursing.

### 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** Strong oxidizing agents.



## 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>	Tightly fitting safety goggles
<b>Skin and body protection</b>	Wear protective gloves/clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation wear suitable respiratory equipment.
<b>Hygiene measures</b>	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.

## 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
<b>Odor</b>	No information available
<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
<b>pH</b>	No information available		
<b>Melting point/freezing point</b>	259-273 °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>Upper flammability limit</b>	No information available		
<b>Lower flammability 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>	Poorly soluble in water		
<b>Solubility in other solvents</b>	Soluble in: Dimethylsulfoxide, Dimethylformamide		
<b>Partition coefficient: n-octanol/water</b>	0.6		
<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>	588.56 g/mol
<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

Strong oxidizing agents.

### Hazardous Decomposition Products

Carbon oxides (COx).

## SECTION 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May be harmful if inhaled.
<b>Eye contact</b>	May cause irritation.
<b>Skin contact</b>	May cause irritation.
<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.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
etoposide	1784 mg/kg ( Rat )	-	-

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

<b>Symptoms</b>	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	Animal experiments showed mutagenic and teratogenic effects.
<b>Carcinogenicity</b>	This substance has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1)



The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical name	IARC	NTP	OSHA
etoposide 33419-42-0	1	-	X

**Legend:**

IARC: (International Agency for Research on Cancer) *Group 1 - Carcinogenic to Humans*

NTP: (National Toxicity Program) *Not listed*

OSHA: (Occupational Safety & Health Administration) *X - Present*

**Reproductive toxicity**

May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility.

**Developmental toxicity**

Possible risk of harm to the unborn child

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

**Neurological effects**

No information available.

**Aspiration Hazard**

No information available.

## SECTION 12. Ecological information

**Ecotoxicity****Persistence and degradability**

Not readily biodegradable

**Mobility**

Is not likely mobile in the environment due its low water solubility

**Bioaccumulation**

Chemical name	Octanol-Water Partition Coefficient
etoposide	0.6

**Other adverse effects**

No information available.

## SECTION 13. Disposal considerations

**Waste Disposal Methods**

Should not be released into the environment.

**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

This material is not subject to regulation as a hazardous material for shipping.

## SECTION 15. Regulatory information

**North American Inventory Listing**

Chemical name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
etoposide	Not Listed	Not Listed	Listed	Not Listed



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

Class D2A - Very Toxic Material at $\geq 0.1\%$
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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 contains chemicals known to the State of California to cause cancer or reproductive toxicity

Chemical name	California Prop. 65
etoposide	Carcinogen Developmental

**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.

<b>SECTION 16. Other information</b>
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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