



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

**Issuing Date:** 2017-08-28

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**Version:** 3

## SECTION 1. Identification

### Product identifier

**Product No** 59863  
**Product name** Ghost Dye Violet 510 Fixable Viability Dye  
**UN number** NA1993

### 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>Skin corrosion/irritation</b>	Category 2
<b>Serious eye damage/eye irritation</b>	Category 2A
<b>Flammable liquids</b>	Category 4

### GHS Label elements, including precautionary statements



**Signal Word**  
Warning

**Hazard statement(s)**

Combustible liquid.  
Causes skin irritation.  
Causes serious eye irritation.

**Precautionary Statement(s)**

Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
Wash face, hands and any exposed skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF ON SKIN: Wash with plenty of soap and water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash before reuse  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
In case of fire: Use dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam to extinguish  
Store in a well-ventilated place.  
Dispose of contents/container to an approved waste disposal plant.

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

Not applicable.

**Unknown Acute Toxicity** 0% of the mixture consists of ingredient(s) of unknown acute toxicity

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

**Formula** C<sub>2</sub>H<sub>6</sub>OS

Chemical name	CAS No	Weight-%
dimethyl sulfoxide	67-68-5	95 - <100

**SECTION 4. First-aid measures**

**Eye contact** Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.  
**Skin contact** Wash off with warm water and soap. If symptoms persist, call a physician.  
**Inhalation** Move to fresh air. If not breathing, give artificial respiration. Consult a physician.  
**Ingestion** Rinse mouth. Do not induce vomiting without medical advice. If symptoms persist, call a physician.

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

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Irritating to eyes and skin.

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

Treat symptomatically.

**Advice for emergency responders**

**General advice** For further assistance, contact your local Poison Control Center.  
**Protection of first-aiders** 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 Water spray Carbon dioxide (CO <sub>2</sub> ) Foam Dry chemical
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**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating gases and vapors. Vapors may form explosive mixture with air.

**Explosion Data**

<b>Sensitivity to Mechanical Impact</b>	None
<b>Sensitivity to Static Discharge</b>	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**

<b>For non-emergency personnel</b>	Avoid contact with skin, eyes and clothing. Use personal protective equipment. Avoid breathing dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation.
<b>Other information</b>	No information available.

**Environmental precautions**

Should not be released into the environment. Prevent product from entering drains.

**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Soak up with inert absorbent material.

## SECTION 7. Handling and storage

**Precautions for safe handling**

Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapors or spray mist. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

<b>Technical measures/Storage conditions</b>	Keep in a dry, cool and well-ventilated place. Protect from light.
<b>Packaging material</b>	No information available
<b>Incompatible products</b>	Strong oxidizing agents

## SECTION 8. Exposure controls/personal protection

**Control parameters**

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**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>	Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

## SECTION 9. Physical and chemical properties

**Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid
<b>Appearance</b>	No information available
<b>Color</b>	Colorless
<b>Odor</b>	Sulfur-like odor
<b>Odor Threshold</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>	6-8		
<b>Melting point/freezing point</b>	18-19 °C / 64.4-66.2 °F		
<b>Boiling point or initial boiling point and boiling range</b>	188-190 °C / 370-374 °F		
<b>Flash point</b>	87-89 °C / 188.6-192.2 °F		
<b>Evaporation rate</b>	No information available		
<b>Flammability</b>	No information available		
<b>Lower explosion limit</b>	2.4-2.8%		
<b>Upper explosion limit</b>	61-64%		
<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>	No information available.		
<b>Solubility in other solvents</b>	No information available.		
<b>Partition coefficient: n-octanol/water</b>	log Kow = -1.35		
<b>Autoignition temperature</b>	214-216 °C / 417.2-420.8 °F		
<b>Decomposition temperature</b>	No information available	No information available.	
<b>Viscosity</b>	No information available		
<b>Viscosity, dynamic</b>	No information available		

**Other information**

<b>Softening point</b>	No information available
<b>Molecular Weight</b>	No information available
<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**

Keep away from open flames, hot surfaces and sources of ignition

### **Incompatible Materials**

Strong oxidizing agents

### **Hazardous Decomposition Products**

Sulfur oxides

## **SECTION 11. Toxicological information**

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

<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin contact</b>	May be absorbed through the skin in harmful amounts. May cause irritation.
<b>Ingestion</b>	May be 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>
dimethyl sulfoxide	= 28300 mg/kg (Rat)	= 40000 mg/kg ( Rat )	> 5.33 mg/L ( Rat ) 4 h

**Unknown Acute Toxicity** 0% 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>	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Irritating to eyes and skin.
<b>Skin corrosion/irritation</b>	Irritating to skin.
<b>Serious eye damage/eye irritation</b>	Irritating to eyes.
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	No information available.
<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>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Neurological effects</b>	No information available.

**Aspiration Hazard**

No information available.

**SECTION 12. Ecological information****Ecotoxicity**

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

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
dimethyl sulfoxide	-	LC50 34000 mg/L (Pimephales promelas) 96 h LC50 33 - 37 g/L (Oncorhynchus mykiss) 96 h LC50 40 g/L (Lepomis macrochirus) 96 h LC50 41.7 g/L (Cyprinus carpio) 96 h	-

**Persistence and degradability**

Readily biodegradable

**Mobility**

No information available

**Bioaccumulation**

Does not bioaccumulate

Chemical name	Octanol-Water Partition Coefficient
dimethyl sulfoxide	-1.35

**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**

NA1993

**UN proper shipping name**

Combustible liquid, n.o.s. (Dimethyl Sulfoxide (DMSO))

**Packing group**

III

**SECTION 15. Regulatory information****North American Inventory Listing**

All components of this product are NOT included on the Toxic Substance Control Act (TSCA) Inventory, DSL, or NDSL All components of this product are NOT included on DSL or NDSL

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

**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**

Acute Health Hazard	No
Chronic Health Hazard	No
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 contains the following U.S. State Right to Know chemicals:

Chemical name	New Jersey	Massachusetts	Pennsylvania
dimethyl sulfoxide	Listed	Not Listed	Not Listed

**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