

Safety Data Sheet



Section 1: Identification

Product identifier

Product Name • **Visudyne® (verteporfin for injection)**

Product Code • 301875600150; NDC 0187-5600-15

Relevant identified uses of the substance or mixture and uses advised against

Recommended use • Visudyne® (verteporfin for injection) is a light activated drug used in photodynamic therapy.

Details of the supplier of the safety data sheet

Manufacturer • Valeant Pharmaceuticals North America, LLC
400 Somerset Corporate Blvd.
Bridgewater, NJ 08807
United States
valeant.com

Telephone (General) • 1-800-321-4576

Emergency telephone number

Manufacturer • 1-800-535-5053 - US - Infotrac

Manufacturer • +1 352-323-3500 - International - Infotrac

This safety data sheet is written to provide health, safety and environmental information for people handling this formulated product in the workplace. It is not intended to provide information relevant to consumer use of the product.

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012

- Skin Irritation 2
- Eye Irritation 2A
- Reproductive Toxicity 2
- Effects on or via Lactation
- Germ Cell Mutagenicity 2
- Hazards Not Otherwise Classified - Health Hazards - Photosensitizer

Label elements

OSHA HCS 2012

WARNING



Hazard statements • Photosensitizer
Causes skin irritation
Causes serious eye irritation

May cause harm to breast-fed children
 Suspected of damaging fertility or the unborn child.
 Suspected of causing genetic defects.

Precautionary statements

- Prevention** • Do not handle until all safety precautions have been read and understood.
 Avoid contact during pregnancy/while nursing.
 Wash thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
- Response** • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If skin irritation occurs: Get medical advice/attention.
 Take off contaminated clothing and wash before reuse.
 If exposed, avoid exposure to sun or bright light.
- Storage/Disposal** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards

- OSHA HCS 2012 • No data available

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Mixtures

Composition		
Chemical Name	Identifiers	%
Ascorbyl palmitate	CAS:137-66-6 EINECS:205-305-4	< 0.1%
Butylated hydroxytoluene	CAS:128-37-0 EINECS:204-881-4	< 0.01%
Dimyristoyl phosphatidylcholine	CAS:18656-38-7 EINECS:242-481-1	< 10%
Egg phosphatidylglycerol	CAS:93685-90-6 EINECS:297-639-2	< 10%
Lactose monohydrate	CAS:64044-51-5	> 80%
Verteporfin	CAS:129497-78-5	1.8%

The exact percentage of composition has been withheld as a trade secret.

Section 4: First-Aid Measures

Description of first aid measures

Inhalation

- Remove source of exposure. Seek medical attention if irritation or signs of toxicity occur. Providesymptomatic or supportive care as necessary.

Skin

- After contact with skin, take off immediately all contaminated clothing and wash immediately with plenty of (to be specified by manufacturer). If irritation develops and persists, get medical attention.

Eye

- If eye contact occurs, rinse eyes under gently running water for at least 15 minutes. Use sufficient force to open eyelids and roll eyes while flushing. Seek medical attention if irritation persists or signs of toxicity occur. Provide symptomatic or supportive care as necessary.

Ingestion

- Remove source of exposure. Seek medical attention if irritation or signs of toxicity occur. Provide symptomatic or supportive care as necessary. If signs/symptoms develop, get medical attention.

Most important symptoms and effects, both acute and delayed

- Skin and eye contact should be avoided due to the potential for photosensitivity reactions upon exposure to light. If exposed, they should protect all parts of their skin and their eyes by wearing protective clothing and dark sunglasses. UV sunscreens are not effective in protecting against photosensitivity reactions because photoactivation of the residual drug in the skin can be caused by visible light.

Indication of any immediate medical attention and special treatment needed**Notes to Physician**

- Treat according to accepted protocols. For additional guidance, refer to the current prescribing information.

Other information

- Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Additional details are provided on the product packaging and/or in the product insert.

Section 5: Fire-Fighting Measures**Extinguishing media**

Suitable Extinguishing Media • Water spray, carbon dioxide, dry chemical powder or appropriate foam for surrounding fire.

Unsuitable Extinguishing Media • No data available

Firefighting Procedures • As with all fires, evacuate personnel to safe area. Firefighters should use self-contained breathing equipment and appropriate protective clothing.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • No data available

Hazardous Combustion Products • During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Advice for firefighters

- No data available

Section 6 - Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Personal Precautions • Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Skin and eye contact should be avoided due to the potential for photosensitivity reactions upon exposure to light. Use of rubber gloves and eye protection is recommended.

Emergency Procedures • Keep unauthorized personnel away.

Environmental precautions

- LARGE SPILLS: Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Containment/Clean-up Measures • For breakage or spill of material prior to reconstitution, dampen powder with water then wipe up with damp cloth.

For liquid spill after reconstitution, wipe up spill and place in liquid-tight container for disposal. Wear personal protective equipment to avoid contact with skin and eyes.

Other Information

- In the event of a release of bulk material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- No special handling is required. Refer to Section 8. Use only in accordance with product literature. Use of impervious gloves is recommended if there is a potential for skin contact.

Conditions for safe storage, including any incompatibilities

Storage

- Keep tightly closed. Store at controlled room temperature 20-25°C/68-77°F (excursions permitted to 15-30°C/59-86°F), to maintain product integrity. Use before date marked on carton and/or container.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines

- No regulatory limits for ribavirin have been established. Good industrial hygiene practices should be followed to reduce exposures as much as possible.

Exposure Limits/Guidelines				
	Result	ACGIH	Canada Quebec	NIOSH
Butylated hydroxytoluene (128-37-0)	STELs	Not established	10 mg/m ³ STEV	Not established
	TWAs	2 mg/m ³ TWA (inhalable fraction and vapor)	Not established	10 mg/m ³ TWA

Exposure Control Notations

ACGIH

- Butylated hydroxytoluene (128-37-0): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Exposure Limits Supplemental

ACGIH

- Butylated hydroxytoluene (128-37-0): **TLV Basis - Critical Effects:** (upper respiratory tract irritation)

Exposure controls

Engineering

Measures/Controls

- Use chemical fume hood, process enclosures, local exhaust ventilation or other engineering controls to minimize airborne levels.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Use NIOSH approved respiratory protection (US requirements)

Eye/Face

- Wear eye/face protection , .

Hands

- Wear protective gloves .

Skin/Body

- Avoid contact with skin.

Environmental Exposure Controls

- No special controls are required under conditions of intended use. In the event of a bulk spill, prevent spilled material from entering storm sewers or drains, waterways, and contact with the soil.

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	dark green lyophilized cake.
Color	Dark green.	Odor	Not relevant
Odor Threshold	Not relevant		
General Properties			
Boiling Point	No data available	Melting Point/Freezing Point	> 240 °C(> 464 °F)
Decomposition Temperature	> 290 °C(> 554 °F)	pH	No data available
Specific Gravity/Relative Density	No data available	Water Solubility	Soluble
Viscosity	Not relevant		
Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant		
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not relevant		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- Stable under normal temperatures and pressures.

Chemical stability

- No data available

Possibility of hazardous reactions

- No data available

Conditions to avoid

- Light exposure. Will slowly degrade once reconstituted. Avoid exposure to extreme heat or cold.

Incompatible materials

- No data available

Hazardous decomposition products

- No data available

Section 11 - Toxicological Information

Information on toxicological effects

Components		
Verteporfin (1.8%)	129497-78-5	Acute Toxicity: Intravenous-Woman TDLo • 150 mg/kg; Cardiac: Cardiomyopathy including infarction; Cardiac: Arrhythmias (including changes in conduction); Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: Multiple enzyme effects

GHS Properties	Classification

Acute toxicity	OSHA HCS 2012 • Classification criteria not met
Skin corrosion/Irritation	OSHA HCS 2012 • Skin Irritation 2
Serious eye damage/Irritation	OSHA HCS 2012 • Eye Irritation 2A
Skin sensitization	OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization	OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	OSHA HCS 2012 • Germ Cell Mutagenicity 2
Toxicity for Reproduction	OSHA HCS 2012 • Additional category for effects on or via lactation; Toxic to Reproduction 2
STOT-SE	OSHA HCS 2012 • Classification criteria not met
STOT-RE	OSHA HCS 2012 • Classification criteria not met

Potential Health Effects

Inhalation

- Acute (Immediate) • May cause irritation.
- Chronic (Delayed) • No data available

Skin

- Acute (Immediate) • May cause irritation.
- Chronic (Delayed) • No data available.

Eye

- Acute (Immediate) • May cause irritation.
- Chronic (Delayed) • No data available

Ingestion

- Acute (Immediate) • Not expected to be an exposure route. However, may cause gastric and intestinal irritation if ingested.
- Chronic (Delayed) • No data available

Mutagenic Effects

- Photodynamic therapy (PDT) as a class has been reported to result in DNA damage including DNA strand breaks, alkali-labile sites, DNA degradation, and DNA-protein cross links which may result in chromosomal aberrations, sister chromatid exchanges (SCE), and mutations. In addition, other photodynamic therapeutic agents have been shown to increase the incidence of SCE in Chinese hamster ovary (CHO) cells irradiated with visible light and in Chinese hamster lung fibroblasts irradiated with near UV light, increase mutations and DNA-protein cross-linking in mouse L5178 cells, and increase DNA-strand breaks in malignant human cervical carcinoma cells, but not in normal cells. Verteporfin was not evaluated in these latter systems. It is not known how the potential for DNA damage with PDT agents translates into human risk.

Carcinogenic Effects			
	CAS	IARC	NTP
Butylated hydroxytoluene	128-37-0	Group 3-Not Classifiable	Evidence of Carcinogenicity

Reproductive Effects

- There are no data with the use of VISUDYNE in pregnant women to inform a drug-associated risk. Intravenous administration of verteporfin to pregnant rats during the period of organogenesis produced an increase in the incidence of anophthalmia/microphthalmia and wavy ribs at exposures approximately 40-fold the human exposure at the recommended clinical dose. Verteporfin did not produce adverse fetal effect in rats or rabbits at exposures 6-to 20-fold the human exposure at the recommended clinical dose. Lactation: Verteporfin and its diacid metabolite have been found in human breast milk following an intravenous infusion at the recommended human dose of 6 mg/m². Verteporfin was present in breast milk at

levels up to 66% of the corresponding plasma levels and declined below the limit of quantification (2 ng/mL) within 24 hours. The diacid metabolite had lower peak concentrations but persisted up to at least 48 hours.

Other information

- **PHOTOSENSITIZER:** Verteporfin is photoactivated by certain wavelengths of light (which are among those naturally found in the spectrum of sunlight). This may cause Visudyne to be hazardous to persons exposed to it, and then exposed to certain wavelengths of light outside of a controlled clinical setting. Following exposure, care should be taken to avoid direct sunlight or bright indoor light for 5 days.

Section 12 - Ecological Information

Toxicity

- This material has not been tested for environmental effects.

Persistence and degradability

- No data available

Bioaccumulative potential

- No data available

Mobility in Soil

- No data available

Other adverse effects

Section 13 - Disposal Considerations

Waste treatment methods

Product waste

- Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	Environmental hazards
DOT	Not Applicable	Not Regulated	Not Applicable	Not Applicable	
TDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	
IMO/IMDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	
IATA/ICAO	Not Applicable	Not Regulated	Not Applicable	Not Applicable	

Special precautions for user

- No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- No data available

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture**SARA Hazard Classifications** • No data available

Inventory				
Component	CAS	Canada DSL	EU EINECS	TSCA
Butylated hydroxytoluene	128-37-0	Yes	Yes	Yes
Verteporfin	129497-78-5	No	No	No
Lactose monohydrate	64044-51-5	No	No	No
Dimyristoyl phosphatidylcholine	18656-38-7	No	Yes	No
Egg phosphatidylglycerol	93685-90-6	Yes	Yes	No
Ascorbyl palmitate	137-66-6	Yes	Yes	Yes

Canada**Labor****Canada - WHMIS - Classifications of Substances**

• Butylated hydroxytoluene	128-37-0	Not Listed
• Lactose monohydrate	64044-51-5	Not Listed
• Ascorbyl palmitate	137-66-6	Uncontrolled product according to WHMIS classification criteria (listed under Scorbic palmitate)
• Verteporfin	129497-78-5	Not Listed
• Egg phosphatidylglycerol	93685-90-6	Not Listed
• Dimyristoyl phosphatidylcholine	18656-38-7	Not Listed

Canada - WHMIS - Ingredient Disclosure List

• Butylated hydroxytoluene	128-37-0	1 %
• Lactose monohydrate	64044-51-5	Not Listed
• Ascorbyl palmitate	137-66-6	Not Listed
• Verteporfin	129497-78-5	Not Listed
• Egg phosphatidylglycerol	93685-90-6	Not Listed
• Dimyristoyl phosphatidylcholine	18656-38-7	Not Listed

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Butylated hydroxytoluene	128-37-0	Not Listed
• Lactose monohydrate	64044-51-5	Not Listed
• Ascorbyl palmitate	137-66-6	Not Listed
• Verteporfin	129497-78-5	Not Listed
• Egg phosphatidylglycerol	93685-90-6	Not Listed
• Dimyristoyl phosphatidylcholine	18656-38-7	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Butylated hydroxytoluene	128-37-0	Not Listed
• Lactose monohydrate	64044-51-5	Not Listed
• Ascorbyl palmitate	137-66-6	Not Listed
• Verteporfin	129497-78-5	Not Listed

• Egg phosphatidylglycerol	93685-90-6	Not Listed
• Dimyristoyl phosphatidylcholine	18656-38-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Butylated hydroxytoluene	128-37-0	Not Listed
• Lactose monohydrate	64044-51-5	Not Listed
• Ascorbyl palmitate	137-66-6	Not Listed
• Verteporfin	129497-78-5	Not Listed
• Egg phosphatidylglycerol	93685-90-6	Not Listed
• Dimyristoyl phosphatidylcholine	18656-38-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Butylated hydroxytoluene	128-37-0	Not Listed
• Lactose monohydrate	64044-51-5	Not Listed
• Ascorbyl palmitate	137-66-6	Not Listed
• Verteporfin	129497-78-5	Not Listed
• Egg phosphatidylglycerol	93685-90-6	Not Listed
• Dimyristoyl phosphatidylcholine	18656-38-7	Not Listed

Section 16 - Other Information

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