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**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****Product identifier**

<b>Trade name</b>	VELPAR® DF VU
<b>Product code (UVP)</b>	84088250
<b>SDS Number</b>	102000030328

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

<b>Use</b>	Herbicide
<b>Restrictions on use</b>	See product label for restrictions.

**Information on supplier**

<b>Supplier</b>	Environmental Science U.S. LLC. 5000 Centregreen Way, Suite 400 Cary, NC 27513 USA
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**Emergency telephone no.**

<b>Emergency Telephone Number (24hr/ 7 days)</b>	1-800-424-9300
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<b>Product Information Telephone Number</b>	1-800-331-2867
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**SECTION 2: HAZARDS IDENTIFICATION****Classification in accordance with regulation HCS 29CFR §1910.1200**

Serious eye damage: Category 1

Acute toxicity(Oral): Category 4

**Signal word:** Danger**Hazard statements**

Causes serious eye damage.

Harmful if swallowed.

**Precautionary statements**

Wear eye protection/face protection.

Wash thoroughly after handling.

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Do not eat, drink or smoke when using this product.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor/physician.  
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.  
Rinse mouth.  
Dispose of contents/container in accordance with local regulation.

**Other hazards**

No other hazards known.

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Component Name	CAS-No.	Concentration % by weight
Hexazinone	51235-04-2	75.0

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**SECTION 4: FIRST AID MEASURES****Description of first aid measures**

<b>General advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Inhalation</b>	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
<b>Skin contact</b>	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
<b>Eye contact</b>	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

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

**Symptoms** To date no symptoms are known.

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

**Treatment** Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

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**SECTION 5: FIREFIGHTING MEASURES****Extinguishing media****Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**Unsuitable** High volume water jet**Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire.**Advice for firefighters****Special protective equipment for fire-fighters** Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.**Further information** Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses. Fight fire from upwind position. Keep out of smoke.**Flash point** not applicable**Autoignition temperature** no data available**Lower explosion limit** not applicable**Upper explosion limit** not applicable**Explosivity** no data available

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**SECTION 6: ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Precautions** Evacuate and isolate spill area. Keep unauthorized people away. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces.**Methods and materials for containment and cleaning up****Methods for cleaning up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Clean contaminated floors and objects thoroughly, observing environmental regulations.**Additional advice** Do not allow to enter soil, waterways or waste water canal.**Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

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**SECTION 7: HANDLING AND STORAGE****Precautions for safe handling**

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.  
Remove and wash contaminated gloves, including the inside, before re-use. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

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

**Requirements for storage areas and containers** Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Keep out of the reach of children.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Hexazinone	51235-04-2	50ug/m3 (ST ESL)	07 2011	TX ESL
Hexazinone	51235-04-2	5ug/m3 (AN ESL)	07 2011	TX ESL
Barium sulfate (1:1) (Inhalable fraction.)	7727-43-7	5 mg/m3 (TWA)	02 2014	ACGIH
Barium sulfate (1:1) (Total)	7727-43-7	10 mg/m3 (REL)	2010	NIOSH
Barium sulfate (1:1) (Respirable.)	7727-43-7	5 mg/m3 (REL)	2010	NIOSH
Barium sulfate (1:1) (Respirable fraction.)	7727-43-7	5 mg/m3 (PEL)	02 2006	OSHA Z1
Barium sulfate (1:1) (Total dust.)	7727-43-7	15 mg/m3 (PEL)	02 2006	OSHA Z1
Barium sulfate (1:1) (Respirable fraction.)	7727-43-7	5 mg/m3 (TWA)	1989	OSHA Z1A
Barium sulfate (1:1) (Total dust.)	7727-43-7	10 mg/m3 (TWA)	1989	OSHA Z1A
Barium sulfate (1:1) (Total dust.)	7727-43-7	10 mg/m3 (TWA)	06 2008	TN OEL
Barium sulfate (1:1) (Respirable fraction.)	7727-43-7	5 mg/m3 (TWA)	06 2008	TN OEL

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Barium sulfate (1:1)	7727-43-7	50ug/m3 (ST ESL)	03 2014	TX ESL
Barium sulfate (1:1)	7727-43-7	5ug/m3 (AN ESL)	03 2014	TX ESL
Sodium benzoate	532-32-1	50ug/m3 (ST ESL)	03 2014	TX ESL
Sodium benzoate	532-32-1	5ug/m3 (AN ESL)	03 2014	TX ESL

**Exposure controls****Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection**

When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

**Hand protection**

Chemical resistant nitrile rubber gloves

**Eye protection**

Protective eyewear

**Skin and body protection**

Wear long-sleeved shirt and long pants and shoes plus socks.

**General protective measures**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.

Keep and wash PPE separately from other laundry.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	light tan
<b>Physical State</b>	granular
<b>Odor</b>	mild pungent
<b>Odour Threshold</b>	no data available
<b>pH</b>	8.4 at 10 % (20 °C)
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Evaporation rate</b>	not applicable
<b>Boiling Point</b>	not applicable
<b>Melting / Freezing Point</b>	not applicable
<b>Water solubility</b>	dispersible
<b>Minimum Ignition Energy</b>	no data available
<b>Decomposition temperature</b>	no data available

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<b>Partition coefficient: n-octanol/water</b>	not applicable
<b>Viscosity</b>	not applicable
<b>Flash point</b>	not applicable
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Explosivity</b>	no data available

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**SECTION 10: STABILITY AND REACTIVITY****Reactivity**

<b>Thermal decomposition</b>	no data available
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Incompatible materials</b>	Strong acids, Strong bases
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>Exposure routes</b>	Eye contact, Skin contact, Ingestion
<b>Immediate Effects</b>	
<b>Eye</b>	Corrosive - causes irreversible eye damage.
<b>Skin</b>	Moderate skin irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	LD50 (rat) 1,310 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (rat) > 5.2 mg/l Exposure time: 4 h
<b>Acute dermal toxicity</b>	LD50 (rat) > 5,000 mg/kg
<b>Skin irritation</b>	Moderate skin irritation. (rabbit)

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**Eye irritation** Irritating to eyes. (rabbit)  
**Sensitisation** Non-sensitizing. (guinea pig)

**ACGIH**

None.

**NTP**

None.

**IARC**

None.

**OSHA**

None.

**Further information**

Only acute toxicity studies have been performed on the formulated product.

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**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity to fish** LC50 (Oncorhynchus mykiss (rainbow trout)) > 320 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient hexazinone.

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) 110 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient hexazinone.

**Toxicity to other organisms** LD50 (Colinus virginianus (Bobwhite quail)) 2,258 mg/kg  
The value mentioned relates to the active ingredient hexazinone.

**Environmental precautions** Do not allow to get into surface water, drains and ground water.  
Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.  
Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.  
Apply this product as specified on the label.

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**SECTION 13: DISPOSAL CONSIDERATIONS****Waste treatment methods**

**Product** Dispose in accordance with all local, state/provincial and federal regulations.  
Follow container label instructions for disposal of wastes generated during use in compliance with the product label.

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	Do not contaminate water, food, or feed by disposal.
<b>Contaminated packaging</b>	Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.
<b>RCRA Information</b>	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

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**SECTION 14: TRANSPORT INFORMATION**

<b>49CFR</b>	Not dangerous goods / not hazardous material
<b>IMDG</b>	
UN number	<b>3077</b>
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (HEXAZINONE MIXTURE)
<b>IATA</b>	
UN number	<b>3077</b>
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (HEXAZINONE MIXTURE )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

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**SECTION 15: REGULATORY INFORMATION**

<b>EPA Registration No.</b>	101563-187
<b>US Federal Regulations</b>	
<b>TSCA list</b>	
Hexazinone	51235-04-2

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### US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

### SARA Title III - Section 302 - Notification and Information

None.

### SARA Title III - Section 313 - Toxic Chemical Release Reporting

Hexazinone 51235-04-2

### US States Regulatory Reporting

#### CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

### US State Right-To-Know Ingredients

Hexazinone 51235-04-2 NJ, RI

### Canadian Regulations

#### Canadian Domestic Substance List

None.

### Environmental

#### CERCLA

None.

#### Clean Water Section 307 Priority Pollutants

None.

#### Safe Drinking Water Act Maximum Contaminant Levels

None.

### EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

**Signal word:** Danger!

**Hazard statements:** Corrosive - causes irreversible eye damage.  
Harmful if swallowed.  
Do not get in eyes or on clothing.  
Avoid contact with skin.  
Wash thoroughly with soap and water after handling.

## SECTION 16: OTHER INFORMATION

### Abbreviations and acronyms

49CFR Code of Federal Regulations, Title 49  
ACGIH US. ACGIH Threshold Limit Values

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CAS-Nr.	Chemical Abstracts Service number
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	US. IARC Monographs on Occupational Exposures to Chemical Agents
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

### NFPA 704 (National Fire Protection Association):

Health - 2      Flammability - 1      Instability - 0      Others - none

### HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2      Flammability - 1      Physical Hazard - 0      PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

**Reason for Revision:** New Safety Data Sheet.

**Revision Date:** 10/28/2015

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