

**VELUM ONE**Version 4.0 / USA  
102000018148

1/10

Revision Date: 11/30/2015

Print Date: 12/02/2015

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

**Trade name** VELUM ONE  
**Product code (UVP)** 79373821, 84446521  
**SDS Number** 102000018148  
**EPA Registration No.** 264-1078

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

**Use** Fungicide, Nematicide  
**Restrictions on use** See product label for restrictions.

**Information on supplier**

**Supplier** Bayer CropScience  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
United States  
**Responsible Department** Email: SDSINFO.BCS-NA@bayer.com

**Emergency telephone no.**

**Emergency Telephone Number (24hr/ 7 days)** 1-800-334-7577

**Product Information Telephone Number** 1-866-99BAYER (1-866-992-2937)

**SECTION 2: HAZARDS IDENTIFICATION****Classification in accordance with regulation HCS 29CFR §1910.1200**

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

**Other hazards**

No particular hazards known.

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

<b>Hazardous Component Name</b>	<b>CAS-No.</b>	<b>Concentration % by weight</b>
Fluopyram	658066-35-4	41.5
1,2-Propanediol	57-55-6	6.67
Polyethylene-polypropylene copolymer	9003-11-6	1.67

**VELUM ONE**Version 4.0 / USA  
102000018148

2/10

Revision Date: 11/30/2015

Print Date: 12/02/2015

**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>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
<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** No symptoms known or expected.**Indication of any immediate medical attention and special treatment needed****Treatment** There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.**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** In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx)**Advice for firefighters****Special protective equipment for fire-fighters** Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.**Further information** Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.**Flash point** > 100 °C



### VELUM ONE

Version 4.0 / USA  
102000018148

3/10

Revision Date: 11/30/2015

Print Date: 12/02/2015

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<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	no data available
<b>Upper explosion limit</b>	no data available
<b>Explosivity</b>	Not explosive 92/69/EEC, A.14 / OECD 113

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Precautions** Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

### Methods and materials for containment and cleaning up

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Use personal protective equipment. 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 Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. 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. Store in original container and out of the reach of children, preferably in a locked storage area. Protect from freezing.

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**VELUM ONE**Version 4.0 / USA  
102000018148

4/10

Revision Date: 11/30/2015

Print Date: 12/02/2015

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

Components	CAS-No.	Control parameters	Update	Basis
Fluopyram	658066-35-4	0.34 mg/m <sup>3</sup> (OES BCS)		OES BCS*
1,2-Propanediol	57-55-6	50ppb (AN ESL)	03 2014	TX ESL
1,2-Propanediol	57-55-6	100ug/m <sup>3</sup> (AN ESL)	03 2014	TX ESL
1,2-Propanediol	57-55-6	1000ug/m <sup>3</sup> (ST ESL)	03 2014	TX ESL
1,2-Propanediol	57-55-6	500ppb (ST ESL)	03 2014	TX ESL
1,2-Propanediol (Aerosol.)	57-55-6	10 mg/m <sup>3</sup> (TWA)	2010	WEEL
Polyethylene-polypropylene copolymer	9003-11-6	100ug/m <sup>3</sup> (AN ESL)	03 2014	TX ESL
Polyethylene-polypropylene copolymer	9003-11-6	1000ug/m <sup>3</sup> (ST ESL)	03 2014	TX ESL

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**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**

Safety glasses with side-shields

**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**

**Appearance** white to beige

**Physical State** suspension

**Odor** characteristic

**VELUM ONE**Version 4.0 / USA  
102000018148

5/10

Revision Date: 11/30/2015

Print Date: 12/02/2015

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<b>Odour Threshold</b>	no data available
<b>pH</b>	5.0 - 8.0 at 100 % (23 °C)
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Density</b>	ca. 1.20 g/cm <sup>3</sup> at 20 °C
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	no data available
<b>Melting / Freezing Point</b>	no data available
<b>Water solubility</b>	dispersible
<b>Minimum Ignition Energy</b>	not applicable
<b>Decomposition temperature</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	not applicable
<b>Viscosity</b>	200 - 400 mPa.s Velocity gradient 20 /s
<b>Flash point</b>	> 100 °C
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	no data available
<b>Upper explosion limit</b>	no data available
<b>Explosivity</b>	Not explosive 92/69/EEC, A.14 / OECD 113
<b>Other information</b>	Further safety related physical-chemical data are not known.

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

<b>Thermal decomposition</b>	no data available
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<b>Incompatible materials</b>	no data available
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

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**VELUM ONE**Version 4.0 / USA  
102000018148

6/10

Revision Date: 11/30/2015

Print Date: 12/02/2015

**SECTION 11: TOXICOLOGICAL INFORMATION****Exposure routes** Ingestion, Skin Absorption, Inhalation, Eye contact**Immediate Effects****Skin** The product may be absorbed through the skin. Harmful if absorbed through skin.**Ingestion** Harmful if swallowed.**Information on toxicological effects****Acute oral toxicity** LD50 (rat) > 2,000 mg/kg**Acute inhalation toxicity** LC50 (rat) > 1.911 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.  
Highest attainable concentration.**Acute dermal toxicity** LD50 (rat) > 2,000 mg/kg**Skin irritation** No skin irritation (rabbit)**Eye irritation** No eye irritation (rabbit)**Sensitisation** Non-sensitizing. (mouse)  
OECD Test Guideline 429, local lymph node assay (LLNA)**Assessment repeated dose toxicity**

Fluopyram did not cause specific target organ toxicity in experimental animal studies.

**Assessment mutagenicity**

Fluopyram was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**Assessment carcinogenicity**

Fluopyram caused at high dose levels an increased incidence of tumours in rats in the following organ(s): liver.

Fluopyram caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Thyroid.

The tumours seen with Fluopyram were caused through a non-genotoxic mechanism, which is not relevant at low doses. The mechanism that triggers these tumours is not relevant to humans.

**ACGIH**

None.

**NTP**

None.

**IARC**

None.

**OSHA**

None.

**VELUM ONE**Version 4.0 / USA  
102000018148

7/10

Revision Date: 11/30/2015

Print Date: 12/02/2015

**Assessment toxicity to reproduction**

Fluopyram caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Fluopyram is related to parental toxicity.

**Assessment developmental toxicity**

Fluopyram caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Fluopyram are related to maternal toxicity.

**Further information**

Only acute toxicity studies have been performed on the formulated product.  
The non-acute information pertains to the active ingredient(s).

**SECTION 12: ECOLOGICAL INFORMATION**

<b>Toxicity to fish</b>	LC50 (Cyprinus carpio (Carp)) > 200 mg/l Exposure time: 96 h
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) 141 mg/l Exposure time: 48 h
<b>Toxicity to aquatic plants</b>	EC50 (Raphidocelis subcapitata (freshwater green alga)) 14.6 mg/l Growth rate; Exposure time: 72 h  EC50 (Lemna gibba (gibbous duckweed)) 8.1 mg/l Growth rate; Exposure time: 7 d Test conducted with a similar formulation.
<b>Biodegradability</b>	Fluopyram: not rapidly biodegradable
<b>Koc</b>	Fluopyram: Koc: 279
<b>Bioaccumulation</b>	Fluopyram: Bioconcentration factor (BCF) 18 Does not bioaccumulate.
<b>Mobility in soil</b>	Fluopyram: Moderately mobile in soils
<b>Additional ecological information</b>	No other effects to be mentioned.
<b>Environmental precautions</b>	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. Do not apply when weather conditions favor runoff or drift. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Apply this product as specified on the label.



### VELUM ONE

Version 4.0 / USA  
102000018148

8/10

Revision Date: 11/30/2015  
Print Date: 12/02/2015

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Product** Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law.  
It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.

**Contaminated packaging** Do not re-use empty containers.  
Triple rinse containers.  
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.  
Follow advice on product label and/or leaflet.

**RCRA Information** 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.

## SECTION 14: TRANSPORT INFORMATION

**49CFR** Not dangerous goods / not hazardous material

### IMDG

UN number **3082**  
Class 9  
Packaging group III  
Marine pollutant YES  
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUOPYRAM SOLUTION)

### IATA

UN number **3082**  
Class 9  
Packaging group III  
Environm. Hazardous Mark YES  
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUOPYRAM SOLUTION )

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.





### VELUM ONE

Version 4.0 / USA  
102000018148

9/10

Revision Date: 11/30/2015

Print Date: 12/02/2015

## SECTION 15: REGULATORY INFORMATION

**EPA Registration No.** 264-1078

### US Federal Regulations

#### TSCA list

1,2-Propanediol 57-55-6

Polyethylene-polypropylene copolymer 9003-11-6

### 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

None.

### 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

1,2-Propanediol 57-55-6 MN

### 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:** Caution!

**Hazard statements:** Harmful if swallowed or absorbed through skin.  
Avoid contact with skin, eyes and clothing.  
Wash thoroughly with soap and water after handling.



### VELUM ONE

Version 4.0 / USA  
102000018148

10/10

Revision Date: 11/30/2015

Print Date: 12/02/2015

## SECTION 16: OTHER INFORMATION

### Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
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:** The following sections have been revised: Section 1: Chemical Product and Company Information. Reviewed and updated for general editorial purposes.

**Revision Date:** 11/30/2015

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