



## VELUM™ TOTAL

Version 2.0 / USA  
102000026719

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

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### Product identifier

Trade name VELUM™ TOTAL

Product code (UVP) 80845472

SDS Number 102000026719

EPA Registration No. 264-1171

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

Use Insecticide, Nematicide

Restrictions on use See product label for restrictions.

#### Information on manufacturer

Bayer CropScience  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
United States

#### Emergency telephone no.

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

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

SDS Information or Request [SDSINFO.BCS-NA@bayer.com](mailto:SDSINFO.BCS-NA@bayer.com)

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification in accordance with regulation HCS 29CFR §1910.1200

Acute toxicity (Oral, Inhalation): Category 4



**Signal word:** Warning

#### Hazard statements

Harmful if swallowed.  
Harmful if inhaled.

#### Precautionary statements

Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Avoid breathing dust, mist, spray.



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Use only outdoors or in a well-ventilated area.  
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.  
Rinse mouth.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER/doctor/physician if you feel unwell.  
Dispose of contents/container in accordance with local regulation.

### Other hazards

No other hazards known.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Imidacloprid	138261-41-3	22.20
Fluopyram	658066-35-4	15.40
1,2-Propanediol	57-55-6	7.50

## 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

<b>Symptoms</b>	To date no symptoms are known.
<b>Indication of any immediate medical attention and special treatment needed</b>	
<b>Treatment</b>	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** Use appropriate extinguishing media for material that is supplying fuel.  
Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

**Flash point** no data available

**Autoignition temperature** no data available

**Lower explosion limit** no data available

**Upper explosion limit** no data available

**Explosivity** not applicable

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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** Ensure adequate ventilation. Handle and open container in a manner as to prevent spillage.

**Hygiene measures** 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. Store in original container and out of the reach of children, preferably in a locked storage area.

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

**Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Imidacloprid	138261-41-3	50ug/m3 (ST ESL)	07 2011	TX ESL
Imidacloprid	138261-41-3	5ug/m3 (AN ESL)	07 2011	TX ESL
Imidacloprid	138261-41-3	0.7 mg/m3 (TWA)		OES BCS*
Fluopyram	658066-35-4	0.34 mg/m3 (OES BCS)		OES BCS*
1,2-Propanediol (Vapor.)	57-55-6	100ug/m3 (ST ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	500ppb (ST ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	100ug/m3 (AN ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	50ppb (AN ESL)	02 2013	TX ESL
1,2-Propanediol (Aerosol.)	57-55-6	10 mg/m3 (TWA)	2010	WEEL

\*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



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following recommendations would apply.

<b>Respiratory protection</b>	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.
<b>Hand protection</b>	Chemical resistant nitrile rubber gloves
<b>Eye protection</b>	Safety glasses with side-shields
<b>Skin and body protection</b>	Wear long-sleeved shirt and long pants and shoes plus socks.
<b>General protective measures</b>	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. 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>	white to beige
<b>Physical State</b>	suspension
<b>Odor</b>	characteristic
<b>Odour Threshold</b>	no data available
<b>pH</b>	5.5 - 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>	1.17 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>	no data available
<b>Viscosity</b>	200 - 400 mPa.s at 20 °C Velocity gradient 20 /s 350 - 700 mPa.s at 20 °C Velocity gradient 7.5 /s
<b>Flash point</b>	no data available
<b>Autoignition temperature</b>	no data available



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<b>Lower explosion limit</b>	no data available
<b>Upper explosion limit</b>	no data available
<b>Explosivity</b>	not applicable

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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>Conditions to avoid</b>	no data available
<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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**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>Exposure routes</b>	Ingestion, Inhalation, Eye contact, Skin contact
<b>Immediate Effects</b>	
<b>Eye</b>	May cause mild irritation to eyes.
<b>Skin</b>	May cause mild irritation to the skin.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Mists may cause respiratory tract irritation.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	(female rat) 1,750 mg/kg
<b>Acute inhalation toxicity</b>	(male rat) > 5.17 mg/l Exposure time: 4 h (female rat) 2.09 - 5.17 mg/l Exposure time: 4 h
<b>Acute dermal toxicity</b>	(male/female combined rat) > 5,000 mg/kg
<b>Skin irritation</b>	No skin irritation (rabbit)
<b>Eye irritation</b>	Slight irritation (rabbit)
<b>Sensitisation</b>	Non-sensitizing. (mouse) OECD Test Guideline 429, local lymph node assay (LLNA)



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### Assessment repeated dose toxicity

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

### Assessment Mutagenicity

Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.  
Fluopyram was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

### Assessment Carcinogenicity

Imidacloprid was not carcinogenic in lifetime feeding studies in rats and mice.  
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.

### Assessment toxicity to reproduction

Imidacloprid 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 Imidacloprid is related to parental toxicity.  
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

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

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## SECTION 12: ECOLOGICAL INFORMATION



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<b>Toxicity to fish</b>	LC50 (Oncorhynchus mykiss (rainbow trout)) > 2 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient fluopyram. No acute toxicity was observed at its limit of water solubility.  LC50 (Oncorhynchus mykiss (rainbow trout)) 211 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient imidacloprid.
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) > 20 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient fluopyram. No acute toxicity was observed at its limit of water solubility.  EC50 (Daphnia magna (Water flea)) 85 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient imidacloprid.  LC50 (Chironomus riparius (non-biting midge)) 0.0552 mg/l Exposure time: 24 h The value mentioned relates to the active ingredient imidacloprid.
<b>Toxicity to aquatic plants</b>	EC50 (Pseudokirchneriella subcapitata) 8.9 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient fluopyram.  EC50 (Desmodesmus subspicatus) > 10 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient imidacloprid.
<b>Biodegradability</b>	Imidacloprid: ; not rapidly biodegradable Fluopyram: ; not rapidly biodegradable
<b>Koc</b>	Imidacloprid: Koc: 225 Fluopyram: Koc: 279
<b>Bioaccumulation</b>	Imidacloprid: ; Does not bioaccumulate. Fluopyram: Bioconcentration factor (BCF) 18; Does not bioaccumulate.
<b>Mobility in soil</b>	Imidacloprid: Moderately mobile in soils Fluopyram: Moderately mobile in soils
<b>Environmental precautions</b>	Do not allow to get into surface water, drains and ground water. 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** Never place unused product down any indoor or outdoor drain.





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**Contaminated packaging** Consult state and local regulations regarding the proper disposal of container.  
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.

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**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.  
(IMIDACLOPRID, 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.  
(IMIDACLOPRID, 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.

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**SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 264-1171

**US Federal Regulations**

**TSCA list**

1,2-Propanediol 57-55-6

**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**



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**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.  
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

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**SECTION 16: OTHER INFORMATION**

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

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

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

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

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

**Reason for Revision:** Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

**Bayer CropScience**  
SAFETY DATA SHEET



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