Velum® Prime Nematicide

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SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Trade name Velum® Prime Nematicide

Product code (UVP) 80978235

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

Use Nematicide

1.3 Details of the supplier of the safety data sheet

Supplier Bayer Cropscience Pty Ltd

ABN 87 000 226 022 Level 4, 109 Burwood Rd

Hawthorn 3122

Victoria Australia

Telephone (03) 9248 6888 **Telefax** (03) 9248 6800

Responsible Department 1800 804 479 Technical Information Service

Website www.crop.bayer.com.au

1.4 Emergency telephone no.

Emergency telephone no. 1800 033 111 IXOM Operations Pty Ltd

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Australian GHS Regulation

Chronic aquatic toxicity: Category 2

H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to specific Australian legislation

No hazard label for supply/use required.

2.3 Other hazards

No additional hazards known beside those mentioned.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Fluopyram 400 g/l

Suspension concentrate (=flowable concentrate)(SC)

Chemical name	CAS-No.	Concentration [%]
Fluopyram	658066-35-4	34.48
1,2-Propanediol	57-55-6	>= 5.00 - <= 20.00
1,2-Benzisothiazol-3(2H)-one	2634-33-5	>= 0.005 - <= 0.05
Mixture of: 5-chloro-2-methyl-4-isothiazolin-	55965-84-9	>= 0.0002 - <= 0.0015
3-one and 2-methyl-4-isothiazolin-3-one		
Other ingredients (non-hazardous) to 100%		

SECTION 4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.

4.1 Description of first aid measures

General advice Move out of dangerous area. Place and transport victim in stable

position (lying sideways). Remove contaminated clothing immediately

and dispose of safely.

Inhalation Move to fresh air. Keep patient warm and at rest. Call a physician or

poison control center immediately.

Skin contact Wash off thoroughly with plenty of soap and water, if available with

polyethyleneglycol 400, subsequently rinse with water. Get medical

attention if irritation develops and persists.

Eye contact 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.

Ingestion Do NOT induce vomiting. Call a physician or poison control center

immediately. Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms To date no symptoms are known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment There is no specific antidote. Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Water spray, Carbon dioxide (CO2), Foam, Sand

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Unsuitable High volume water jet

5.3 Advice for firefighters

Special protective equipment for firefighters In the event of fire and/or explosion do not breathe fumes. Wear self-

contained breathing apparatus and protective suit.

Further information Contain the spread of the fire-fighting media. Do not allow run-off from

fire fighting to enter drains or water courses.

Hazchem Code •3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions Avoid contact with spilled product or contaminated surfaces. Use

personal protective equipment.

6.2 Environmental

precautions

Do not allow to get into surface water, drains and ground water.

6.3 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). Clean contaminated floors and objects thoroughly, observing environmental regulations. Collect and transfer the product into a properly labelled and tightly closed

container.

6.4 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.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion

No special precautions required.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes

separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be

destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Protect from frost.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Fluopyram	658066-35-4	0.34 mg/m3 (TWA)		OES BCS*
1,2-Propanediol	57-55-6	474 mg/m3/150 ppm (TWA)	12 2011	AU NOEL
(Total vapour and particulates.)				
1,2-Propanediol	57-55-6	10 mg/m3 (TWA)	12 2011	AU NOEL
(Particulate.)		, ,		

^{*}OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Respiratory protection is not required under anticipated Respiratory protection

circumstances of exposure.

Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's

instructions regarding wearing and maintenance.

Hand protection Please observe the instructions regarding permeability and

> breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the

contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating.

drinking, smoking or using the toilet.

Material Nitrile rubber Rate of permeability > 480 min Glove thickness > 0.4 mmProtective index Class 6

Directive Protective gloves complying with EN

374.

Eye protection Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection Wear standard coveralls and Category 3 Type 6 suit.

> Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and

should be professionally laundered frequently.

If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully

remove and dispose of as advised by manufacturer.

Engineering Controls

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Advice on safe handling Use only in area provided with appropriate exhaust ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form suspension

Colour white to beige

Odour characteristic

Odour Threshold No data available

pH 5.5 - 8.0 (100 %) (23 °C)

Melting point/rangeNo data availableBoiling PointNo data available

Flash point > 85 °C

No flash point up to decomposition.

Flammability No data available

Auto-ignition temperature 430 °C

Thermal decomposition No data available

Ignition temperature 430 °C

Minimum ignition energy No data available
Self-accelarating No data available

decomposition temperature

(SADT)

Upper explosion limitNo data availableLower explosion limitNo data availableVapour pressureNo data availableEvaporation rateNo data availableRelative vapour densityNo data availableRelative densityNo data available

Density ca. $1.16 \text{ g/cm}^3 (20 \text{ °C})$

Water solubility No data available

Partition coefficient: n-

octanol/water

Fluopyram: log Pow: 3.3

Viscosity, dynamic

Viscosity, kinematic

Impact sensitivity

Oxidizing properties

No data available

No timpact sensitive.

No oxidizing properties

Explosivity Not explosive

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92/69/EEC, A.14 / OECD 113

9.2 Other information Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of No hazardous reactions when stored and handled according to

hazardous reactions prescribed instructions.

10.4 Conditions to avoid Extremes of temperature and direct sunlight.

10.5 Incompatible materials Store only in the original container.

,

decomposition products

10.6 Hazardous

No decomposition products expected under normal conditions of use.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity LD50 (Rat) > 2,000 mg/kg

Acute inhalation toxicity LC50 (Rat) > 3.34 mg/l Exposure time: 4 h

Highest attainable concentration.

No deaths

Determined in the form of a respirable aerosol.

Acute dermal toxicity LD50 (Rat) > 2,000 mg/kg
Skin corrosion/irritation No skin irritation (Rabbit)

Serious eye damage/eye

irritation

No eye irritation (Rabbit)

Respiratory or skin Skin: Non-sensitizing. (Mouse)

sensitisation OECD Test Guideline 429, local lymph node assay (LLNA)

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.

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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.

Assessment STOT Specific target organ toxicity - single exposure

Fluopyram: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity - repeated exposure

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

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Harmful if inhaled.
Harmful in contact with skin.
May cause eye irritation.
Harmful if swallowed.

Early onset symptoms related to exposure

Refer to Section 4

Delayed health effects from exposure

Refer to Section 11

Exposure levels and health effects

Refer to Section 4

Interactive effects

Not known

When specific chemical data is not available

Not applicable

Mixture of chemicals

Refer to Section 2.1

Further information

No further toxicological information is available.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) > 284 mg/l

Exposure time: 96 h

Tested up to its maximum solubility.

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Toxicity to aquatic EC50 (Daphnia magna (Water flea)) > 77.7 mg/l

invertebrates Exposure time: 48 h

Tested up to its maximum solubility.

EC50 (Raphidocelis subcapitata (freshwater green alga)) 22.9 mg/l Toxicity to aquatic plants

Growth rate; Exposure time: 72 h

ErC50 (Lemna gibba (gibbous duckweed)) 13.4 mg/l

Growth rate; Exposure time: 7 d

NOEC (Lemna gibba (gibbous duckweed)) 0.294 mg/l

Growth rate; Exposure time: 7 d

12.2 Persistence and degradability

Biodegradability Fluopyram:

Not rapidly biodegradable

Koc Fluopyram: Koc: 279

12.3 Bioaccumulative potential

Bioaccumulation Fluopyram: Bioconcentration factor (BCF) 18

Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Fluopyram: Moderately mobile in soils

12.5 Other adverse effects

Additional ecological

information

No other effects to be mentioned.

SECTION 13. DISPOSAL CONSIDERATIONS

Triple-rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Do not burn empty containers or product.

Do not reuse container for any other purpose.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number 3082 Transport hazard class(es) 9 Subsidiary Risk None Packaging group Ш

Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(FLUOPYRAM SOLUTION)

Hazchem Code •3Z

AU01: Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not

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subject to this Code when transported by road or rail in;

a) packagings that do not incorporate a receptacle exceeding 500 kg(L); or

b) IBCs

IMDG

UN number 3082
Transport hazard class(es) 9
Subsidiary Risk None
Packaging group III
Marine pollutant YES

Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(FLUOPYRAM SOLUTION)

IATA

UN number 3082
Transport hazard class(es) 9
Subsidiary Risk None
Packaging group III
Environm. Hazardous Mark YES

Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(FLUOPYRAM SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994 Australian Pesticides and Veterinary Medicines Authority approval number: 94142

SUSMP classification (Poison Schedule)

Exempt (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 16. OTHER INFORMATION

Trademark information Velum® is a Registered Trademark of the Bayer Group.

Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by

Inland Waterways

ADR European Agreement concerning the International Carriage of Dangerous Goods by

Road

ATE Acute toxicity estimate

AU OEL Australia. OELs. (Adopted National Exposure Standards for Atmospheric

Contaminants in the Occupational Environment)

CAS-Nr. Chemical Abstracts Service number

CEILING Ceiling Limit Value Conc. Concentration

EC-No. European community number ECx Effective concentration to x %

EINECS European inventory of existing commercial substances

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ELINCS European list of notified chemical substances

EN European Standard EU European Union

IATA International Air Transport Association

IBC International Code for the Construction and Equipment of Ships Carrying Dangerous

Chemicals in Bulk (IBC Code)

ICx Inhibition concentration to x %

IMDG International Maritime Dangerous Goods

LCx Lethal concentration to x %

LDx Lethal dose to x %

LOEC/LOEL Lowest observed effect concentration/level

MARPOL: International Convention for the prevention of marine pollution from ships

N.O.S. Not otherwise specified

NOEC/NOEL No observed effect concentration/level

OECD Organization for Economic Co-operation and Development

OES BCS OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure

Standard"

PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration

of a particular substance determined over the shortest analytically practicable period of

time which does not exceed 15 minutes.

RID Regulations concerning the International Carriage of Dangerous Goods by Rail

SK-SEN Skin sensitiser

SKIN_DES SKIN_DES: Skin notation: Absorption through the skin may be a significant source of

exposure.

STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA

exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the

STEL.

TWA: Exposure standard - time-weighted average (TWA): The average airborne

concentration of a particular substance when calculated over a normal eight-hour

working day, for a five-day working week.

TWA Time weighted average

UN United Nations

WHO World health organisation

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.