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

1.1 Product identifier

Trade name Luna® Sensation Fungicide
Product code (UVP) 84469882

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

Use Fungicide

1.3 Details of the manufacturer or importer

Supplier Bayer CropScience Pty Ltd
ABN 87 000 226 022
391-393 Tooronga Road, East Hawthorn
Victoria 3123, Australia

Telephone (03) 9248 6888
Facsimile (03) 9248 6800

Technical Information Service 1800 804 479

Website www.bayercropscience.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

Sensitisation - skin: Category 1
H317 May cause an allergic skin reaction.

Carcinogenicity: Category 2
H351 Suspected of causing cancer.

Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Hazardous components which must be listed on the label:
- Fluopyram
- Trifloxystrobin

Signal word: Warning

Hazard statements
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing spray mist.
P280	Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with relevant Local, State or Territory Government Regulations.

2.3 Other hazards
No other hazards known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature
Suspension concentrate (=flowable concentrate) (SC)
Fluopyram/Trifloxystrobin 250:250 g/l

Name	CAS-No.	Conc. [%]
Fluopyram	658066-35-4	21.4
Trifloxystrobin	141517-21-7	21.4
1,2-Propanediol	57-55-6	<10
Mixture of 5-chlor-2-methyl-3(2H)-isothiazolon and 2-methyl-2H-isothiazol-3-on	55965-84-9	<0.05
1,2-Benzisothiazol-3(2H)-one	2634-33-5	>0.005 - <0.05
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 centre immediately.

Skin contact
Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

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
Rinse mouth. Do NOT induce vomiting. Call a physician or poison control centre immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms
No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment
Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable
High volume water jet.

5.2 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), Carbon monoxide (CO), Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment for fire-fighters
In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information
Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Evacuate personnel to safe areas. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. 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.

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). Collect and transfer the product in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

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.

Hygiene measures
Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. 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
Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. 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.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Fluopyram	658066-35-4	0,34 mg/m^3 (OES BCS)		OES BCS*
Trifloxystrobin	141517-21-7	2,7 mg/m^3 (TWA)		OES BCS*
1,2-Propanediol (Total vapour and particulates.)	57-55-6	474 mg/m^3 / 150 ppm (TWA)	12 2011	AU OEL
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m^3 (TWA)	12 2011	AU OEL

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

Biological limit values
None

8.2 Exposure controls

Personal protective equipment – End User

Respiratory protection — Respiratory protection is not required under anticipated circumstances of exposure.

Hand protection	Elbow-length PVC or nitrile gloves
Eye protection	Eye protection is not required under anticipated circumstances of exposure
Skin and body protection	Cotton overall buttoned to the neck and wrist

Engineering Controls
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

Appearance

Form	suspension
Colour	white to beige
Odour	characteristic

Safety data

pH	5.0 - 8.0 at 100 % (23 °C)
Flash point	> 100 °C
Ignition temperature	370 °C
Upper explosion limit	no data available
Lower explosion limit	no data available
Vapour pressure	no data available
Relative vapour density	no data available
Density	ca. 1,17 g/cm³ at 20 °C
Water solubility	suspensive
Partition coefficient: n- octanol/water	Fluopyram: log Pow: 3,3 Trifloxystrobin: log Pow: 4,5 at 25 °C
Surface tension	38 mN/m at 25 °C Determined in the undiluted form.
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive 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

Thermal decomposition
Stable under normal conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

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

10.4 Conditions to avoid
Extremes of temperature and direct sunlight.

10.5 Incompatible materials
Store only in the original container.

10.6 Hazardous decomposition products
No decomposition products expected under normal conditions of use.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD_{50} (rat) 2.000 mg/kg
Acute inhalation toxicity	LC_{50} (rat) > 1,7 mg/l Exposure time: 4 h Determined in the form of liquid aerosol Highest attainable concentration No deaths
Acute dermal toxicity	LD_{50} (rat) > 2.000 mg/kg
Skin irritation	No skin irritation (rabbit)
Eye irritation	No eye irritation (rabbit)
Sensitisation	Sensitizing The value mentioned relates to the active ingredient trifloxystrobin

Assessment mutagenicity
Fluopyram was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Trifloxystrobin 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. Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.

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

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

Aspiration hazard
Based on the classification of the components of the mixture, an aspiration hazard is not expected for the mixture.

Information on possible routes of exposure

Inhalation	Harmful if inhaled.
Skin	No skin irritation.
Eye	No eye irritation.
Ingestion	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 11

Interactive effects
Not known

When specific chemical data is not available
Not applicable

Mixture of chemicals
Refer to Section 2.1

Other Information
None

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC_{50} (*Oncorhynchus mykiss* (rainbow trout)) 0,091 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC_{50} (*Daphnia magna* (Water flea)) 0,086 mg/l Exposure time: 48 h
Toxicity to aquatic plants	IC_{50} (*Pseudokirchneriella subcapitata*) 0,292 mg/l Growth rate; Exposure time: 72 h

12.2 Persistence and degradability

Biodegradability	Fluopyram: not rapidly biodegradable Trifloxystrobin: not rapidly biodegradable
Koc	Fluopyram: Koc: 279 Trifloxystrobin: Koc: 2377

12.3 Bioaccumulative potential

Bioaccumulation Fluopyram: Bioconcentration factor (BCF) 18
Does not bioaccumulate.
Trifloxystrobin: Bioconcentration factor (BCF) 431
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Fluopyram: Moderately mobile in soils
Trifloxystrobin: Slightly mobile in soils

12.5 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13. DISPOSAL

Metal drums and plastic containers:
Triple or preferably pressure 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number	**3082**
Transport hazard class	9
Subsidiary Risk	None
Packaging group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

IMDG

UN number	**3082**
Transport hazard class	9
Subsidiary Risk	None
Packaging group	III
EmS	F-A, S-F
Marine pollutant	YES
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN SOLUTION)

IATA

UN number	**3082**
Transport hazard class	9
Subsidiary Risk	None
Packaging group	III

Environm. Hazardous Mark	YES
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 65560

Hazardous classification: Hazardous
(National Occupational Health and Safety Commission - NOHSC)

SUSMP Poison Classification: Schedule 5

SECTION 16. OTHER INFORMATION

Trademark information Luna® is a registered trademark of the Bayer Group.

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.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

Abbreviations and acronyms

AU OEL	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment) CEILING Ceiling Limit Value
OES BCS	OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"
PEAK	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.
SK-SEN	Skin sensitiser
SKIN_DES	SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
STEL	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.
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
TWA	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.

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

END OF SDS