

# SAFETY DATA SHEET



## LUNA® PRO

Version 4.1 / USA  
102000021214

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Revision Date: 01/02/2023  
Print Date: 01/03/2023

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

#### Product identifier

Trade name	LUNA® PRO
Product code (UVP)	79658613
SDS Number	102000021214
EPA Registration No.	264-1084

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

Use	Fungicide
Restrictions on use	See product label for restrictions.

#### Information on supplier

Supplier	Bayer CropScience LP 800 North Lindbergh Blvd. St. Louis, MO 63167 USA
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

Acute toxicity(Inhalation): Category 4

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



**Signal word:** Warning

#### Hazard statements

Harmful if inhaled.

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### Precautionary statements

Avoid breathing mist/ spray.

Use only outdoors or in a well-ventilated area.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

Protect from sunlight.

### Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.

No health hazards not otherwise classified.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Prothioconazole	178928-70-6	17.4
Fluopyram	658066-35-4	17.4

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

#### General advice

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

#### Inhalation

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.

#### Skin contact

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

#### Eye contact

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.

#### Ingestion

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.

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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 firefighters** In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**Further information** 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.

#### Specific hazards from the substance or mixture which can increase the fire

**Flash point** >93.3 °C / 199.94 °F

**Auto-ignition 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. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal.

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**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

### 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. 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. Keep away from direct sunlight. Protect from freezing.

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

## 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> (TWA)		OES BCS*
Prothioconazole	178928-70-6	1.4 mg/m <sup>3</sup> (SK-ABS)		OES BCS*

\*OES BCS: Internal Bayer AG, Crop Science Division "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 gloves (barrier laminate, butyl rubber, nitrile)

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	rubber or Viton)
<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>	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.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Form</b>	Liquid
<b>Colour</b>	white to light beige
<b>Odour</b>	mild, sweet
<b>Odour Threshold</b>	No data available
<b>pH</b>	4 - 6 (10 %) (23 °C) (deionized water)
<b>Melting point/range</b>	No data available
<b>Boiling Point</b>	No data available
<b>Flash point</b>	> 93.3 °C / 199.94 °F
<b>Flammability</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Thermal decomposition</b>	Not applicable
<b>Minimum ignition energy</b>	Not applicable
<b>Self-accelerating decomposition temperature (SADT)</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	ca. 1.15 g/cm <sup>3</sup> (20 °C)
<b>Water solubility</b>	No data available
<b>Partition coefficient: n-</b>	Fluopyram: log Pow: 3.3

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<b>octanol/water</b>	Prothioconazole: log Pow: 3.82 (20 °C) (pH 7)
<b>Viscosity, dynamic</b>	300 - 500 mPa.s (20 °C) Velocity gradient 20 /s
<b>Viscosity, kinematic</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Explosivity</b>	Not applicable

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## SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	Stable under normal conditions.
<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 incompatible materials known.
<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>	Inhalation, Ingestion, Eye contact, Skin contact
<b>Immediate Effects</b>	
<b>Eye</b>	Not expected to produce significant adverse effects when recommended use instructions are followed.
<b>Skin</b>	May be harmful in contact with skin.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Inhalation</b>	Harmful if inhaled.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	LD50 (female Rat) > 5,000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (male/female combined Rat) > 2.22 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. highest concentration tested

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	No deaths
<b>Acute dermal toxicity</b>	LD50 (male/female combined Rat) > 5,050 mg/kg
<b>Skin corrosion/irritation</b>	No skin irritation (Rabbit)
<b>Serious eye damage/eye irritation</b>	No eye irritation (Rabbit)
<b>Respiratory or skin sensitisation</b>	Skin: Non-sensitizing. (Guinea pig)

### Assessment STOT Specific target organ toxicity – single exposure

Fluopyram: Based on available data, the classification criteria are not met.  
Prothioconazole: 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.  
Prothioconazole 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.  
Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence 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.  
Prothioconazole was not carcinogenic in lifetime feeding studies in rats and mice.

### ACGIH

None.

### NTP

None.

### IARC

None.

### 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.  
Prothioconazole 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 Prothioconazole 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.

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

### Aspiration hazard

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

### 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

**Toxicity to fish** LC50 (Oncorhynchus mykiss (rainbow trout)) 1.83 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient prothioconazole.

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) 1.3 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient prothioconazole.

**Toxicity to aquatic plants** IC50 (Raphidocelis subcapitata (freshwater green alga)) 2.18 mg/l  
Growth rate; Exposure time: 72 h  
The value mentioned relates to the active ingredient prothioconazole.  
ErC50 (Skeletonema costatum) 0.03278 mg/l  
Exposure time: 72 h  
The value mentioned relates to the active ingredient prothioconazole.  
EC10 (Skeletonema costatum) 0.01427 mg/l  
Growth rate; Exposure time: 72 h  
The value mentioned relates to the active ingredient prothioconazole.

**Biodegradability** Fluopyram:  
Not rapidly biodegradable  
Prothioconazole:  
Not rapidly biodegradable

**Koc** Fluopyram: Koc: 279  
Prothioconazole: Koc: 1765

**Bioaccumulation** Fluopyram: Bioconcentration factor (BCF) 18  
Does not bioaccumulate.  
Prothioconazole: Bioconcentration factor (BCF) 19  
Does not bioaccumulate.

**Mobility in soil** Fluopyram: Moderately mobile in soils  
Prothioconazole: Slightly mobile in soils

### Results of PBT and vPvB assessment

**PBT and vPvB assessment** Fluopyram: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).  
Prothioconazole: This substance is not considered to be persistent,



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bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

### Additional ecological information

No other effects to be mentioned.

### Environmental precautions

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.

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### Product

Dispose in accordance with all local, state/provincial and federal regulations.

#### 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.

## 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.  
(PROTHIOCONAZOLE SOLUTION)

### IATA

UN number

**3082**

Class

9

Packaging group

III

Environm. Hazardous Mark

YES

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(PROTHIOCONAZOLE 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.** 264-1084

#### US Federal Regulations

##### TSCA list

Water 7732-18-5

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)

No export notification needs to be made.

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

Not applicable.

#### 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, RI

#### Environmental

##### CERCLA

None.

##### Clean Water Section 307(a)(1)

None.

##### Safe Drinking Water Act Maximum Contaminant Levels

None.

#### EPA/FIFRA Information:

This chemical is a pesticide product regulated 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:

#### Hazard statements:

Harmful if swallowed.  
Harmful if inhaled.  
Harmful if absorbed through skin.

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### SECTION 16: OTHER INFORMATION

#### Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
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 Fourth 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,  
\* = chronic health hazard

**Reason for Revision:** The following sections have been revised: Section 11: Toxicological Information.  
Section 15: Regulatory information. Reviewed and updated for general editorial purposes.

**Revision Date:** 01/02/2023

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

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