



## LUNA® TRANQUILITY

Version 3.0 / USA  
102000017503

1/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

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

#### Product identifier

Trade name LUNA® TRANQUILITY

Product code (UVP) 79111894

SDS Number 102000017503

EPA Registration No. 264-1085

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

Use Fungicide

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

Product Information  
Telephone Number

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

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

Hazardous Component Name	CAS-No.	Average % by Weight
Fluopyram	658066-35-4	11.30
Pyrimethanil	53112-28-0	33.80
1,2-Propanediol	57-55-6	5.40



## LUNA® TRANQUILITY

Version 3.0 / USA  
102000017503

2/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

### 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.
<b>Most important symptoms and effects, both acute and delayed</b>	
<b>Symptoms</b>	No symptoms known or expected.
<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.

### SECTION 5: FIREFIGHTING MEASURES

#### Extinguishing media

<b>Suitable</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable</b>	High volume water jet
<b>Special hazards arising from the substance or mixture</b>	In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NOx)
<b>Advice for firefighters</b>	
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
<b>Further information</b>	Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.
<b>Flash point</b>	No flash point - Determination conducted up to the boiling point.



## LUNA® TRANQUILITY

Version 3.0 / USA  
102000017503

3/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

---

<b>Autoignition temperature</b>	560 °C / 1040 °F
<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 with soap and water after handling.

#### 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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**LUNA® TRANQUILITY**

Version 3.0 / USA  
102000017503

4/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

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

**Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Fluopyram	658066-35-4	0.34 mg/m3 (OES BCS)		OES BCS*
Pyrimethanil	53112-28-0	5.6 mg/m3 (TWA)		OES BCS*
1,2-Propanediol (Vapor.)	57-55-6	1000ug/m3 (ST ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	50ppb (AN 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 (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 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**

<b>Appearance</b>	white to beige
<b>Physical State</b>	suspension
<b>Odor</b>	characteristic



## LUNA® TRANQUILITY

Version 3.0 / USA  
102000017503

5/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

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<b>Odour Threshold</b>	no data available
<b>pH</b>	5.0 - 8.5 at 100 % (23 °C)
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Density</b>	ca. 1.11 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>	no data available
<b>Minimum Ignition Energy</b>	not applicable
<b>Decomposition temperature</b>	Stable under normal conditions.
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	220 - 350 mPa.s at 20 °C Velocity gradient 20 /s
<b>Flash point</b>	No flash point - Determination conducted up to the boiling point.
<b>Autoignition temperature</b>	560 °C / 1040 °F
<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>	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>	Store only in the original container.
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

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## LUNA® TRANQUILITY

Version 3.0 / USA  
102000017503

6/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

### SECTION 11: TOXICOLOGICAL INFORMATION

<b>Exposure routes</b>	Ingestion, Inhalation, Skin contact
<b>Immediate Effects</b>	
<b>Eye</b>	May cause eye irritation.
<b>Skin</b>	Harmful if absorbed through skin.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Harmful if inhaled.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	LD50 (rat) > 2,000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (rat) > 1.973 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Highest attainable concentration.  LC50 (rat) > 8.0 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50.
<b>Acute dermal toxicity</b>	LD50 (rat) > 2,000 mg/kg
<b>Skin irritation</b>	No skin irritation (rabbit)
<b>Eye irritation</b>	No eye irritation (rabbit)
<b>Sensitisation</b>	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.  
Pyrimethanil did not cause any significant specific adverse effects or target organ toxicity in subchronic toxicity studies.

#### Assessment Mutagenicity

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

Pyrimethanil was not carcinogenic in lifetime feeding studies in mice. Pyrimethanil caused at high dose levels an increased incidence of tumours in rats in the following organ(s): thyroid. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

#### ACGIH

None.



## LUNA® TRANQUILITY

Version 3.0 / USA  
102000017503

7/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

### NTP

None.

### IARC

None.

### OSHA

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. Pyrimethanil did not cause reproductive toxicity in a two-generation study in rats.

### 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. Pyrimethanil did not cause developmental toxicity in rats and rabbits.

### 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

### Toxicity to fish

LC50 (Rainbow trout (*Oncorhynchus mykiss*)) 10.56 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient pyrimethanil.

LC50 (Rainbow trout (*Oncorhynchus mykiss*)) > 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.

### Toxicity to aquatic invertebrates

EC50 (Water flea (*Daphnia magna*)) 2.9 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient pyrimethanil.

EC50 (Water flea (*Daphnia magna*)) > 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.

### Toxicity to aquatic plants

EC50 (*Pseudokirchneriella subcapitata*) 8.9 mg/l  
Growth rate; Exposure time: 72 h  
The value mentioned relates to the active ingredient fluopyram.

IC50 (*Pseudokirchneriella subcapitata*) 1.2 mg/l  
Exposure time: 96 h



## LUNA® TRANQUILITY

Version 3.0 / USA  
102000017503

8/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

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	The value mentioned relates to the active ingredient pyrimethanil.
<b>Biodegradability</b>	Fluopyram: ; not rapidly biodegradable Pyrimethanil: ; not rapidly biodegradable
<b>Koc</b>	Fluopyram: Koc: 279 Pyrimethanil: Koc: 301
<b>Bioaccumulation</b>	Fluopyram: Bioconcentration factor (BCF) 18; Does not bioaccumulate. Pyrimethanil: ; Does not bioaccumulate.
<b>Mobility in soil</b>	Fluopyram: Moderately mobile in soils Pyrimethanil: 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.

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## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

<b>Product</b>	Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
<b>Contaminated packaging</b>	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.
<b>RCRA Information</b>	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



**LUNA® TRANQUILITY**

Version 3.0 / USA  
10200017503

9/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

**IMDG**

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

**IATA**

UN number **3082**  
Class **9**  
Packaging group **III**  
Environm. Hazardous Mark **YES**  
Proper shipping name **ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PYRIMETHANIL 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.** 264-1085

**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**

**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**



**LUNA® TRANQUILITY**

Version 3.0 / USA  
102000017503

10/10  
Revision Date: 06/11/2014  
Print Date: 02/17/2016

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, inhaled or absorbed through the skin.  
Avoid contact with skin, eyes and clothing.  
Avoid breathing spray mist.  
Remove and wash contaminated clothing before re-use.

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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)

**Revision Date:** 06/11/2014

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