

SAFETY DATA SHEET



INDEMNIFY

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102000030369

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Revision Date: 06/01/2016
Print Date: 06/01/2016

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

Product identifier

Trade name INDEMNIFY
Product code (UVP) 84406104
SDS Number 102000030369
EPA Registration No. 432-1543

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

Use Nematicide
Restrictions on use See product label for restrictions.

Information on supplier

Supplier Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States
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 1-800-331-2867

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.

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 |
|--------------------------|-------------|---------------------------|
| Fluopyram | 658066-35-4 | 34.5 |
| 1,2-Propanediol | 57-55-6 | 7.7 |

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SECTION 4: FIRST AID MEASURES

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. 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 | 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 out mouth and give water in small sips to drink. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to do so by a physician or poison control center. |

Most important symptoms and effects, both acute and delayed

Symptoms No symptoms known or expected.

Indication of any immediate medical attention and special treatment needed

Treatment There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

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

Unsuitable None known.

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 Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point > 94 °C
No flash point - Determination conducted up to the boiling point.

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| | |
|----------------------------------|---|
| Auto-ignition temperature | No data available |
| Lower explosion limit | No data available |
| Upper explosion limit | No data available |
| Explosivity | Not explosive 92/69/EEC, A.14 / OECD 113 |

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

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 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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use only in area provided with appropriate exhaust ventilation. For personal protection see section 8.

Advice on protection against fire and explosion No special precautions required.

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 and put on clean clothing.

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 freezing.

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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 ³ (TWA) | | OES BCS* |
| 1,2-Propanediol | 57-55-6 | 500ppb (ST ESL) | 03 2014 | TX ESL |
| 1,2-Propanediol | 57-55-6 | 100ug/m ³ (AN ESL) | 03 2014 | TX ESL |
| 1,2-Propanediol | 57-55-6 | 1000ug/m ³ (ST ESL) | 03 2014 | TX ESL |
| 1,2-Propanediol | 57-55-6 | 50ppb (AN ESL) | 03 2014 | TX ESL |
| 1,2-Propanediol (Aerosol.) | 57-55-6 | 10 mg/m ³ (TWA) | 2010 | WEEL |
| Polyethylene-polypropylene copolymer | 9003-11-6 | 100ug/m ³ (AN ESL) | 03 2014 | TX ESL |
| Polyethylene-polypropylene copolymer | 9003-11-6 | 1000ug/m ³ (ST ESL) | 03 2014 | TX ESL |

*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

Appearance

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| | |
|---|--|
| Physical State | suspension |
| Odor | weak like soap |
| Odour Threshold | No data available |
| pH | 5.5 - 8.0 at 100 % (23 °C) |
| Vapor Pressure | No data available |
| Vapor Density (Air = 1) | No data available |
| Density | ca. 1.16 g/cm ³ at 20 °C |
| Evaporation rate | No data available |
| Boiling Point | No data available |
| Melting / Freezing Point | No data available |
| Water solubility | dispersible |
| Minimum Ignition Energy | Not applicable |
| Decomposition temperature | No data available |
| Partition coefficient: n-octanol/water | No data available |
| Viscosity | 300 - 450 mPaxs at 20 °C Velocity gradient 20 /s |
| Flash point | > 94 °C No flash point - Determination conducted up to the boiling point. |
| Auto-ignition temperature | No data available |
| Lower explosion limit | No data available |
| Upper explosion limit | No data available |
| Explosivity | Not explosive 92/69/EEC, A.14 / OECD 113 |

SECTION 10: STABILITY AND REACTIVITY

| | |
|---|--|
| Reactivity | |
| Thermal decomposition | No data available |
| Chemical stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | No hazardous reactions when stored and handled according to prescribed instructions. |

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| | |
|---|--|
| Conditions to avoid | Extremes of temperature and direct sunlight. |
| Incompatible materials | No data available |
| Hazardous decomposition products | No decomposition products expected under normal conditions of use. |

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Skin contact, Eye contact, Ingestion

Immediate Effects

Skin Harmful if absorbed through skin.

Ingestion Harmful if swallowed.

Information on toxicological effects

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

Acute inhalation toxicity LC50 (Rat) > 3.34 mg/l
Exposure time: 4 h
Highest attainable concentration.
Determined in the form of a respirable aerosol.

Acute dermal toxicity LD50 (male/female combined Rat) > 2,000 mg/kg

Skin irritation No skin irritation (Rabbit)

Eye irritation No eye irritation (Rabbit)

Sensitisation 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.

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.

ACGIH

None.

NTP

None.

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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.

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.

Further information

Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

| | |
|--|--|
| Toxicity to fish | LC50 (Oncorhynchus mykiss (rainbow trout)) > 284 mg/l Exposure time: 96 h Tested up to its maximum solubility. |
| Toxicity to aquatic invertebrates | EC50 (Daphnia magna (Water flea)) > 77.7 mg/l Exposure time: 48 h Tested up to its maximum solubility. |
| Toxicity to aquatic plants | EC50 (Raphidocelis subcapitata (freshwater green alga)) 22.9 mg/l Growth rate; Exposure time: 72 h EC50 (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 |
| Additional ecological information | The ecological data refer to a similar formulation. 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

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| Product | In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. |
| Contaminated packaging | 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. |
| 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. (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. (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.

SECTION 15: REGULATORY INFORMATION

| | |
|--|----------|
| EPA Registration No. | 432-1543 |
| 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. | |

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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

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 or absorbed through skin.
Avoid contact with skin, eyes and clothing.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

| | |
|---------|---|
| 49CFR | Code of Federal Regulations, Title 49 |
| ACGIH | US. ACGIH Threshold Limit Values |
| ATE | Acute toxicity estimate (ATE) |
| 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 | US. IARC Monographs on Occupational Exposures to Chemical Agents |
| IATA | International Air Transport Association |

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| 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 - 0 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: Reviewed and updated for general editorial purposes. The following sections have been revised: Section 1: Chemical Product and Company Information. Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 7: Handling and Storage. Section 8: Exposure Controls / Personal Protection. Section 10. Stability and reactivity. Section 11: Toxicological Information. SECTION 15: Regulatory information

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