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

Product identifier
Trade name SIVANTO™ PRIME
Product code (UVP) 79718845
SDS Number 102000021884
EPA Registration No. 264-1141

Relevant identified uses of the substance or mixture and uses advised against
Use Insecticide
Restrictions on use See product label for restrictions.

Information on supplier
Supplier Bayer CropScience
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 1-866-99BAYER (1-866-992-2937)

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Skin sensitisation: Category 1
Acute toxicity(Inhalation): Category 4

Labelling in accordance with regulation HCS 29CFR §1910.1200

Signal word: Warning
Hazard statements
May cause an allergic skin reaction.
Harmful if inhaled.
Precautionary statements
Avoid breathing mist and spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
Use only outdoors or in a well-ventilated area.
IF ON SKIN: Wash with plenty of water/soap.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flupyradifurone</td>
<td>951659-40-8</td>
<td>17.09</td>
</tr>
<tr>
<td>Propylene carbonate</td>
<td>108-32-7</td>
<td>42.88</td>
</tr>
</tbody>
</table>

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
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.

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. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Rinse out mouth and give water in small sips to drink. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

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

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

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

Unsuitable None known.

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), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx)

Advice for firefighters

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

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 > 100 °C

Auto-ignition temperature 420 °C / 788 °F

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 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 material is accidentally spilled, 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.

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 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. Keep away from direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flupyradifurone</td>
<td>951659-40-8</td>
<td>2.2 mg/m3 (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Propylene carbonate</td>
<td>108-32-7</td>
<td>500ug/m3 (ST ESL)</td>
<td>03 2014</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Propylene carbonate</td>
<td>108-32-7</td>
<td>50ug/m3 (AN ESL)</td>
<td>03 2014</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Propylene carbonate</td>
<td>108-32-7</td>
<td>5ug/m3 (AN ESL)</td>
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<td>50ug/m3 (ST ESL)</td>
<td>03 2014</td>
<td>TX ESL</td>
</tr>
</tbody>
</table>

*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 nitrile rubber gloves
Eye protection   Tightly fitting safety goggles
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  light yellow to brown, shades of orange
Physical State  Liquid slightly turbid
Odor  characteristic
Odour Threshold  No data available
pH  5.0 - 7.0 at 1 % (23 °C) (deionized water)
Vapor Pressure  No data available
Vapor Density (Air = 1)  No data available
Density  ca. 1.17 g/cm³ at 20 °C
Evaporation rate  No data available
Boiling Point  No data available
Melting / Freezing Point  No data available
Water solubility  soluble
Minimum Ignition Energy  Not applicable
Decomposition temperature  Not applicable
Partition coefficient: n-octanol/water  No data available
Viscosity  No data available
Flash point  > 100 °C
Auto-ignition temperature  420 °C / 788 °F
Lower explosion limit  No data available
Upper explosion limit  No data available
Explosivity  Not explosive
92/69/EEC, A.14 / OECD 113
Other information
Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity
Thermal decomposition Not applicable
Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions.
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 Ingestion, Skin contact, Eye contact
Immediate Effects
Eye Moderate eye irritation.
Skin Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
Ingestion Harmful if swallowed.

Information on toxicological effects
Acute oral toxicity LD50 (female Rat) > 2,000 mg/kg
Acute inhalation toxicity LC50 (female Rat) ca. 3.496 mg/l
Exposure time: 4 h
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 Sensitising (Mouse)
OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment STOT Specific target organ toxicity – repeated exposure
Flupyradifurone did not cause specific target organ toxicity in experimental animal studies.
Assessment mutagenicity
Flupyradifurone was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**Assessment carcinogenicity**

Flupyradifurone was not carcinogenic in lifetime feeding studies in rats and mice.

**ACGIH**
None.

**NTP**
None.

**IARC**
None.

**OSHA**
None.

**Assessment toxicity to reproduction**

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

**Assessment developmental toxicity**

Flupyradifurone 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

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>LC50 (Oncorhynchus mykiss (rainbow trout))</th>
<th>&gt; 585 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposure time: 96 h</td>
<td></td>
</tr>
<tr>
<td>Toxicity to aquatic invertebrates</td>
<td>EC50 (Daphnia magna (Water flea))</td>
<td>684 mg/l</td>
</tr>
<tr>
<td></td>
<td>Exposure time: 48 h</td>
<td></td>
</tr>
<tr>
<td>Chronic toxicity to aquatic invertebrates</td>
<td>NOEC (Chironomus riparius (non-biting midge))</td>
<td>0.0702 mg/l</td>
</tr>
<tr>
<td></td>
<td>Exposure time: 28 d</td>
<td></td>
</tr>
<tr>
<td>Toxicity to aquatic plants</td>
<td>IC50 (Raphidocelis subcapitata (freshwater green alga))</td>
<td>&gt; 250 mg/l</td>
</tr>
<tr>
<td></td>
<td>Growth rate; Exposure time: 72 h</td>
<td></td>
</tr>
<tr>
<td>Biodegradability</td>
<td>Flupyradifurone: Not rapidly biodegradable</td>
<td></td>
</tr>
<tr>
<td>Koc</td>
<td>Flupyradifurone: Koc: 93</td>
<td></td>
</tr>
<tr>
<td>Bioaccumulation</td>
<td>Flupyradifurone: Does not bioaccumulate.</td>
<td></td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>Flupyradifurone: Moderately mobile in soils</td>
<td></td>
</tr>
</tbody>
</table>
Additional ecological information

No other effects to be mentioned.

Environmental precautions

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.
Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites.
Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product
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.

Contaminated packaging
Follow advice on product label and/or leaflet.
Do not re-use empty containers.
Consult state and local regulations regarding the proper disposal of container.

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. (FLUPYRADIFURONE SOLUTION)

IATA
UN number 3082
Class 9
Packaging group III
Environm. Hazardous Mark YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUPYRADIFURONE 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. 264-1141
US Federal Regulations
TSCA list
Propylene carbonate 108-32-7
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
None.

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.
Moderate eye irritation.
Avoid contact with skin and clothing.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
Remove and wash contaminated clothing before re-use.

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 - 1 Flammability - 1 Instability - 0 Others - none

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 2: Hazards Identification.

Revision Date: 01/23/2017

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