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

Product identifier

<table>
<thead>
<tr>
<th>Trade name</th>
<th>ENVIDOR® CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code (UVP)</td>
<td>06328725</td>
</tr>
<tr>
<td>SDS Number</td>
<td>102000011424</td>
</tr>
<tr>
<td>EPA Registration No.</td>
<td>264-831</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Use</th>
<th>Insecticide, Miticide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restrictions on use</td>
<td>See product label for restrictions.</td>
</tr>
</tbody>
</table>

Information on manufacturer

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency telephone no.

All Emergencies, 24hr/7 days 1-800-334-7577

Product Information

Telephone No.

SDS Information or Request SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Skin sensitisation: Category 1
Carcinogenicity: Category 2

Signal word: Warning

Hazard statements

May cause an allergic skin reaction.
Suspected of causing cancer.

Precautionary statements

Avoid breathing mist and spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention. Specific measures (see supplemental first aid instructions on this label). Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention. Store locked up. Dispose of contents/container in accordance with local regulation.

Other hazards
No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spirodiclofen</td>
<td>148477-71-8</td>
<td>22.30</td>
</tr>
<tr>
<td>Glycerine</td>
<td>56-81-5</td>
<td>10.00</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. 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. There is no specific antidote.
SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable: Water, Dry chemical, Foam
Unsuitable: None known.

Special hazards arising from the substance or mixture

In the event of fire the following may be released: Hydrogen chloride (HCl), Carbon monoxide (CO)

Advice for firefighters

Special protective equipment for fire-fighters

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.

Flash point

Not relevant; aqueous solution

Autoignition temperature

no data available

Lower explosion limit

no data available

Upper explosion limit

no data available

Explosivity

not applicable

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.
SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling
Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local 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.

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>Spirodiclofen</td>
<td>148477-71-8</td>
<td>0.39 mg/m³ (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Glycerine (Total dust.)</td>
<td>56-81-5</td>
<td>15 mg/m³ (PEL)</td>
<td>02 2006</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>Glycerine (Respirable fraction.)</td>
<td>56-81-5</td>
<td>5 mg/m³ (PEL)</td>
<td>02 2006</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>Glycerine (Respirable fraction.)</td>
<td>56-81-5</td>
<td>5 mg/m³ (TWA)</td>
<td>1989</td>
<td>OSZ Z1A</td>
</tr>
<tr>
<td>Glycerine (Total dust.)</td>
<td>56-81-5</td>
<td>10 mg/m³ (TWA)</td>
<td>1989</td>
<td>OSZ Z1A</td>
</tr>
<tr>
<td>Glycerine (Total dust and mist.)</td>
<td>56-81-5</td>
<td>10 mg/m³ (TWA)</td>
<td>06 2008</td>
<td>TN OEL</td>
</tr>
<tr>
<td>Glycerine (Respirable fraction and dust or fume.)</td>
<td>56-81-5</td>
<td>5 mg/m³ (TWA)</td>
<td>06 2008</td>
<td>TN OEL</td>
</tr>
<tr>
<td>Glycerine (Particulate.)</td>
<td>56-81-5</td>
<td>50 ug/m³ (ST ESL)</td>
<td>02 2013</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Glycerine (Particulate.)</td>
<td>56-81-5</td>
<td>5 ug/m³ (AN ESL)</td>
<td>02 2013</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Glycerine (Vapor.)</td>
<td>56-81-5</td>
<td>100 ug/m³ (AN ESL)</td>
<td>02 2013</td>
<td>TX ESL</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>white to beige</td>
</tr>
<tr>
<td>Physical State</td>
<td>viscous liquid suspension</td>
</tr>
<tr>
<td>Odor</td>
<td>slight</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>4 - 6 (100 %)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>no data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.09 g/cm³ at 20 °C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>no data available</td>
</tr>
</tbody>
</table>
**Melting / Freezing Point**  
-17.8 °C / -0.0 °F

**Water solubility**  
miscible

**Minimum Ignition Energy**  
not applicable

**Decomposition temperature**  
not applicable

**Partition coefficient: n-octanol/water**  
no data available

**Viscosity**  
700 - 1,000 mPa.s at 23 °C

**Flash point**  
Not relevant; aqueous solution

**Autoignition temperature**  
no data available

**Lower explosion limit**  
no data available

**Upper explosion limit**  
no data available

**Explosivity**  
not applicable

---

**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity**

**Thermal decomposition**  
not applicable

**Chemical stability**  
Stable under normal conditions.

**Possibility of hazardous reactions**  
No dangerous reaction known under conditions of normal use.

**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, Eye contact, Skin contact, Skin Absorption

Immediate Effects

Skin

Harmful if absorbed through skin. May cause sensitisation by skin contact.

Ingestion

Harmful if swallowed.

Information on toxicological effects

Acute oral toxicity

LD50 (male/female combined rat) > 2,000 mg/kg

Acute inhalation toxicity

LC50 (male/female combined rat) > 3.146 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
Highest attainable concentration.

LC50 (male/female combined rat) > 12.58 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.

Acute dermal toxicity

LD50 (male/female combined rat) > 4,000 mg/kg

Skin irritation

No skin irritation (rabbit)

Eye irritation

No eye irritation (rabbit)

Sensitisation

Sensitising (guinea pig)
OECD Test Guideline 406, Magnusson & Kligman test

Assessment repeated dose toxicity

Spirodiclofen did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity

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

Assessment Carcinogenicity

Spirodiclofen caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver.
Spirodiclofen caused at high dose levels an increased incidence of tumours in rats in the following organ(s): uterus, testes. The tumours seen with Spirodiclofen were caused through a non-genotoxic mechanism, which is not relevant at low doses. The mechanism that triggers tumours in rodents is not relevant for the low exposures encountered under normal use conditions.

ACGIH

None.

NTP

None.

IARC
**OSHA**
None.

**Assessment toxicity to reproduction**
Spirodiclofen did not cause reproductive toxicity in a two-generation study in rats.

**Assessment developmental toxicity**
Spirodiclofen 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).

### SECTION 12: ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>LC50 (Rainbow trout (Oncorhynchus mykiss)) &gt; 0.035 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>96 h</td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient spirodiclofen.</td>
<td></td>
</tr>
<tr>
<td>No acute toxicity was observed at its limit of water solubility.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to aquatic invertebrates</th>
<th>EC50 (Water flea (Daphnia magna)) &gt; 0.045 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>48 h</td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient spirodiclofen.</td>
<td></td>
</tr>
<tr>
<td>No acute toxicity was observed at its limit of water solubility.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to aquatic plants</th>
<th>IC50 (Pseudokirchneriella subcapitata) &gt; 0.06 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth rate</td>
<td>Exposure time: 72 h</td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient spirodiclofen.</td>
<td></td>
</tr>
<tr>
<td>No acute toxicity was observed at its limit of water solubility.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Spirodiclofen: not rapidly biodegradable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koc</td>
<td>Spirodiclofen: Koc:31097</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bioaccumulation</th>
<th>Spirodiclofen: Bioconcentration factor (BCF) 491</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not bioaccumulate.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobility in soil</th>
<th>Spirodiclofen: Immobile in soil</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Environmental precautions</th>
<th>Do not allow to get into surface water, drains and ground water.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.</td>
</tr>
<tr>
<td></td>
<td>Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.</td>
</tr>
<tr>
<td></td>
<td>Apply this product as specified on the label.</td>
</tr>
</tbody>
</table>
SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

<table>
<thead>
<tr>
<th>Product</th>
<th>Follow container label instructions for disposal of wastes generated during use in compliance with the product label. Dispose in accordance with all local, state/provincial and federal regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contaminated packaging</td>
<td>Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke.</td>
</tr>
<tr>
<td>RCRA Information</td>
<td>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.</td>
</tr>
</tbody>
</table>

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

SECTION 15: REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>EPA Registration No.</th>
<th>264-831</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Federal Regulations</td>
<td>TSCA list</td>
</tr>
<tr>
<td>Glycerine</td>
<td>56-81-5</td>
</tr>
<tr>
<td>US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)</td>
<td>None.</td>
</tr>
<tr>
<td>SARA Title III - Section 302 - Notification and Information</td>
<td>None.</td>
</tr>
<tr>
<td>SARA Title III - Section 313 - Toxic Chemical Release Reporting</td>
<td>None.</td>
</tr>
<tr>
<td>US States Regulatory Reporting</td>
<td>CA Prop65</td>
</tr>
<tr>
<td>This product contains a chemical known to the State of California to cause cancer. Spirodiclofen</td>
<td>148477-71-8</td>
</tr>
<tr>
<td>This product does not contain any substances known to the State of California to cause reproductive harm.</td>
<td></td>
</tr>
<tr>
<td>US State Right-To-Know Ingredients</td>
<td>Glycerine</td>
</tr>
</tbody>
</table>
Canadian Regulations
Canadian Domestic Substance List
Glycerine 56-81-5

Environmental
CERCLA
None.
Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

International Regulations
European Inventory of Existing Commercial Substances (EINECS)
Glycerine 56-81-5

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.
Do not get in eyes, on skin, or on clothing.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
Wash thoroughly with soap and water after handling.

SECTION 16: OTHER INFORMATION

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: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

Revision Date: 02/07/2014

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.