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

Product identifier
Trade name MOVENTO®
Product code (UVP) 79273932
SDS Number 102000017161
EPA Registration No. 264-1050

Relevant identified uses of the substance or mixture and uses advised against
Use Insecticide
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 1-866-99BAYER (1-866-992-2937)
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 1B
Reproductive toxicity : Category 2

Signal word: Warning

Hazard statements
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.

Precautionary statements
Avoid breathing mist and spray.
Contaminated work clothing should not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of soap and water.
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 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>Spirotetramat</td>
<td>203313-25-1</td>
<td>22.40</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 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 cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NOx)

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: > 100 °C

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>Spirotetramat</td>
<td>203313-25-1</td>
<td>2.8 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>OSHA Z1A</td>
</tr>
<tr>
<td>Glycerine (Total dust.)</td>
<td>56-81-5</td>
<td>10 mg/m³ (TWA)</td>
<td>1989</td>
<td>OSHA 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 µg/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 µg/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 µg/m³ (AN ESL)</td>
<td>02 2013</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Glycerine (Vapor.)</td>
<td>56-81-5</td>
<td>1000 µg/m³ (ST ESL)</td>
<td>02 2013</td>
<td>TX ESL</td>
</tr>
</tbody>
</table>
*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
Remove contaminated clothing immediately and dispose of safely. 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
white to light beige

Physical State
Liquid

Odor
weak chalk-like

Odour Threshold
no data available

pH
4.5

Vapor Pressure
no data available

Vapor Density (Air = 1)
no data available

Density
1.07 g/cm³ 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
not applicable

Partition coefficient: n-octanol/water
no data available

Viscosity
900 - 1,400 mPa.s
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 freezing
Incompatible materials no data available
Hazardous decomposition products no data available

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Skin contact, Skin Absorption, Ingestion
Immediate Effects Eye May cause mild irritation to eyes.
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 (male/female combined rat) > 3 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
No deaths
LC50 (male/female combined rat) > 12 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  
Mild eye irritation. (rabbit)

Sensitisation  
Sensitising (guinea pig)

Assessment repeated dose toxicity  
Spirotetramat did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity  
Spirotetramat was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity  
Spirotetramat was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH  
None.

NTP  
None.

IARC  
None.

OSHA  
None.

Assessment toxicity to reproduction  
Spirotetramat caused male reproductive toxicity in the presence of general toxicity in the rat at very high experimental dose levels. There were no effects on male fertility in mice and dogs. The reproductive toxicity seen with Spirotetramat is due to an overwhelmed elimination capacity at high doses. The high dose levels needed for this effect cannot be achieved even in a worst case exposure scenario.

Assessment developmental toxicity  
Spirotetramat caused developmental toxicity only at dose levels toxic to the dams. Spirotetramat caused a delayed foetal growth, an increased incidence of variations.

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 (Lepomis macrochirus (Bluegill sunfish))  2.20 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient spirotetramat.

Toxicity to aquatic invertebrates  
EC50 (Water flea (Daphnia magna)) > 42.7 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient spirotetramat.
EC50 (Chironomus riparius (non-biting midge)) 0.46 mg/l
Exposure time: 28 d
The value mentioned relates to the active ingredient spirotetramat.

NOEC (Chironomus riparius (non-biting midge)) 0.1 mg/l
Exposure time: 28 d
The value mentioned relates to the active ingredient spirotetramat.

**Toxicity to aquatic plants**
IC50 (Pseudokirchneriella subcapitata) 8.15 mg/l
Growth rate; Exposure time: 72 h
The value mentioned relates to the active ingredient spirotetramat.

**Biodegradability**
Spirotetramat: ; not rapidly biodegradable

**Koc**
Spirotetramat: Koc: 289

**Bioaccumulation**
Spirotetramat: ; Does not bioaccumulate.

**Mobility in soil**
Spirotetramat: Moderately mobile in soils

**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 allow to get into surface water, drains and ground 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.
Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.
Apply this product as specified on the label.
Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Product**
Dispose in accordance with all local, state/provincial and federal regulations.
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.
Triple rinse containers.
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.
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. (SPIROTETRAMATE SOLUTION)

IATA
UN number 3082
Class 9
Packaging group III
Environm. Hazardous Mark YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SPIROTETRAMATE 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.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 264-1050
US Federal Regulations
TSCA list Glycerine 56-81-5
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**
Glycerine 56-81-5 MN

**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.
- Avoid contact with skin and 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: The following sections have been revised: Section 9: Physical and Chemical Properties. Section 14: Transport Information.

Revision Date: 04/15/2014

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.