SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier
Trade name            Movento® 240 SC Insecticide
Product code (UVP)     06424384

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use                  Insecticide

1.3 Details of the supplier of the safety data sheet
Supplier              Bayer Cropscience Pty Ltd
                      ABN 87 000 226 022
                      Level 1, 8 Redfern Road
                      3123 Hawthorn East
                      Victoria
                      Australia
Telephone             (03) 9248 6888
Telefax               (03) 9248 6800
Responsible Department 1800 804 479 Technical Information Service
Website               www.crop.bayer.com.au

1.4 Emergency telephone no.
Emergency telephone no. 1800 033 111 IXOM Operations Pty Ltd

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification in accordance with Australian GHS Regulation
Skin sensitisation: Category 1
H317 May cause an allergic skin reaction.
Reproductive toxicity: Category 2
H361 Suspected of damaging fertility or the unborn child.
Chronic aquatic toxicity: Category 2
H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements
Hazard label for supply/use required.
Hazardous components which must be listed on the label:
Spirotetramat
Signal word: Warning
Hazard statements
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
Precautionary statements
2.3 Other hazards
No other hazards known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature
Spirotetramat 240 g/l
Suspension concentrate (=flowable concentrate)(SC)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration [%]</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>&gt; 1.00 - &lt;= 10.00</td>
</tr>
<tr>
<td>1,2-Benzisothiazol-3(2H)-one</td>
<td>2634-33-5</td>
<td>&gt;= 0.005 - &lt;= 0.05</td>
</tr>
<tr>
<td>Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one</td>
<td>55965-84-9</td>
<td>&gt; 0.0002 - &lt; 0.0015</td>
</tr>
<tr>
<td>Other ingredients (non-hazardous) to 100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.

4.1 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. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact
Wash off thoroughly with plenty of soap and water, if available with polyethylene glycol 400, subsequently rinse with water. If symptoms persist, call a physician.

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 mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms
Systemic: To date no symptoms are known.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment
Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
Suitable
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable
High volume water jet

5.2 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)

5.3 Advice for firefighters
Special protective equipment for firefighters
Wear self-contained breathing apparatus and protective suit.

Further information
Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses.

Hazchem Code
•3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Precautions
Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Use personal protective equipment. Keep unauthorized people away.

6.2 Environmental precautions
Contain contaminated water and fire fighting water. Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 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). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.
6.4 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

7.1 Precautions for safe handling
Advice on safe handling
Use only in area provided with appropriate exhaust ventilation.

Hygiene measures
Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage areas and containers
Keep out of the reach of children. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only.

Advice on common storage
Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 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>1.4 mg/m³ (SK-SEN)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Glycerine</td>
<td>56-81-5</td>
<td>10 mg/m³ (TWA)</td>
<td>12 2011</td>
<td>AU NOEL</td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Respiratory protection
Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating,
drinking, smoking or using the toilet.

Material: Nitrile rubber
Rate of permeability: > 480 min
Glove thickness: > 0.4 mm
Protective index: Class 6

Eye protection
Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection
Wear standard coveralls and Category 3 Type 4 suit.
If there is a risk of significant exposure, consider a higher protective type suit.
Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

General protective measures
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.

Engineering Controls
Advice on safe handling
Use only in area provided with appropriate exhaust ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form: suspension
Colour: white to light beige
Odour: weak, characteristic
pH: 4.0 - 5.0 at 100 % (23 °C)
Flash point: >100 °C
Ignition temperature: ca. 415 °C
No flash point - Determination conducted up to the boiling point.
Density: ca. 1.07 g/cm³ at 20 °C
Water solubility: miscible
Partition coefficient: n-octanol/water: Spirotetramat: log Pow: 2.5 at pH 7
Surface tension: 44 mN/m at 25 °C
Determined in the undiluted form.
Oxidizing properties: No oxidizing properties
Explosivity: Not explosive
92/69/EEC, A.14 / OECD 113

9.2 Other information
Further safety related physical-chemical data are not known.
SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
Thermal decomposition Stable under normal conditions.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions.

10.4 Conditions to avoid Extremes of temperature and direct sunlight.

10.5 Incompatible materials Strong bases, Strong acids, Strong oxidizing agents

10.6 Hazardous decomposition products Thermal decomposition can lead to release of:
Hydrogen cyanide (hydrocyanic acid)
Carbon monoxide
Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute oral toxicity LD50 (Rat) > 2,000 mg/kg
Acute inhalation toxicity LC50 (Rat) > 3.013 mg/l
Exposure time: 4 h
Irritating to respiratory system.
Determined in the form of a respirable aerosol.
Highest attainable concentration.

Acute dermal toxicity LD50 (Rat) > 4,000 mg/kg
Skin irritation No skin irritation (Rabbit)
Eye irritation Slight irritant effect - does not require labelling (Rabbit)
Sensitisation Sensitising (Guinea pig)
OECD Test Guideline 406, Buehler test

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.

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.

Assessment STOT Specific target organ toxicity – single exposure
Spirotetramat: May cause respiratory irritation.

Assessment STOT Specific target organ toxicity – repeated exposure
Spirotetramat did not cause specific target organ toxicity in experimental animal studies.

Aspiration hazard
Based on available data, the classification criteria are not met.

Information on likely routes of exposure
May be harmful if inhaled.
Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
May cause mild irritation to eyes.
Harmful if swallowed.

Early onset symptoms related to exposure
Refer to Section 4

Delayed health effects from exposure
Refer to Section 11

Exposure levels and health effects
Refer to Section 4

Interactive effects
Not known

When specific chemical data is not available
Not applicable

Mixture of chemicals
Refer to Section 2.1

Further information
No further toxicological information is available.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish
LC50 (Oncorhynchus mykiss (rainbow trout)) 7.75 mg/l
Exposure time: 96 h
LC50 (Lepomis macrochirus (Bluegill sunfish)) 2.2 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient spirotetramat.

Toxicity to aquatic
EC50 (Daphnia magna (Water flea)) >= 42.7 mg/l
invertebrates
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.

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

Toxicity to aquatic plants
IC50 (Raphidocelis subcapitata (freshwater green alga)) 13.4 mg/l
Growth rate; Exposure time: 72 h
IC50 (Raphidocelis subcapitata (freshwater green alga)) 8.15 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient spirotetramat.

Toxicity to other organisms
LD50 (Colinus virginianus (Bobwhite quail)) > 2,000 mg/kg
The value mentioned relates to the active ingredient spirotetramat.

12.2 Persistence and degradability
Biodegradability
Spirotetramat: Not rapidly biodegradable

Koc
Spirotetramat: Koc: 289

12.3 Bioaccumulative potential
Bioaccumulation
Spirotetramat: Does not bioaccumulate.

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

12.5 Other adverse effects
Additional ecological information
No other effects to be mentioned.

SECTION 13. DISPOSAL CONSIDERATIONS

Metal drums and plastic containers:
Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.
Do not reuse container for any other purpose.

SECTION 14. TRANSPORT INFORMATION

ADG
UN number 3082
### Transport hazard class(es)
- 9

### Subsidiary Risk
- None

### Packaging group
- III

### Description of the goods
- ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SPIROTETRAMAT SOLUTION)

### Hazchem Code
- •3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

### IMDG
- UN number: 3082
- Transport hazard class(es): 9
- Subsidiary Risk: None
- Packaging group: III
- Marine pollutant: YES
- Description of the goods: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SPIROTETRAMAT SOLUTION)

### IATA
- UN number: 3082
- Transport hazard class(es): 9
- Subsidiary Risk: None
- Packaging group: III
- Environm. Hazardous Mark: YES
- Description of the goods: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SPIROTETRAMAT SOLUTION)

### SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994
Australian Pesticides and Veterinary Medicines Authority approval number: 61864

**SUSMP classification (Poison Schedule)**

Schedule 6 (Standard for the Uniform Scheduling of Medicines and Poisons)

### SECTION 16. OTHER INFORMATION

**Trademark information**

Movento® is a Registered Trademark of the Bayer Group.

**Reason for Revision:**

The following sections have been revised: Section 8: Exposure Controls / Personal Protection. Section 11: Toxicological information on STOT (Specific Target Organ Toxicity) and CMR (Carcinogenic, Mutagenic and toxic to Reproduction). Section 12. Ecological information.

**Abbreviations and acronyms**

ADN: European Agreement concerning the International Carriage of Dangerous Goods by
Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE Acute toxicity estimate
AU OEL Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)
CAS-Nr. Chemical Abstracts Service number
CEILING Ceiling Limit Value
Conc. Concentration
EC-No. European community number
ECx Effective concentration to x %
EINECS European inventory of existing commercial substances
ELINCS European list of notified chemical substances
EN European Standard
EU European Union
IATA International Air Transport Association
IBC International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx Inhibition concentration to x %
IMDG International Maritime Dangerous Goods
LCx Lethal concentration to x %
LDx Lethal dose to x %
LOEC/LOEL Lowest observed effect concentration/level
MARPOL MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S. Not otherwise specified
NOEC/NOEL No observed effect concentration/level
OECD Organization for Economic Co-operation and Development
OES BCS OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"
PEAK PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
RID Regulations concerning the International Carriage of Dangerous Goods by Rail
SK-SEN Skin sensitiser
SKIN_DES SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
STEL STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
TWA TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
UN United Nations
WHO World health organisation

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be
made, the user should contact this company.
Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.