

# Safety Data Sheet



## Engaze® 240 SC Insecticide

Version 5 / AUS  
102000011328

Revision Date: 01.07.2024  
Print Date: 01.07.2024

### SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Trade name** Engaze® 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 4, 109 Burwood Rd  
Hawthorn 3122  
Victoria  
Australia

**Telephone** (03) 9248 6888

**Telefax** (03) 9248 6800

**Responsible Department** 1800 804 479 Technical Information Service

**Website** [www.crop.bayer.com.au](http://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.

Specific target organ toxicity - single exposure: Category 3

H335 May cause respiratory irritation.

Chronic aquatic toxicity: Category 2

H411 Toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling according to specific Australian legislation

Hazard label for supply/use required.

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### 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.  
H335 May cause respiratory irritation.

### Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing mist/ spray.  
P280 Wear protective gloves/ protective clothing.  
P302 + P352 IF ON SKIN: Wash with plenty of water/ soap.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER/doctor/physician if you feel unwell.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local regulation.

### 2.3 Other hazards

No additional hazards known beside those mentioned.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Chemical nature

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

Chemical name	CAS-No.	Concentration [%]
Spirotetramat	203313-25-1	22.40
Glycerine	56-81-5	> 1.00 - <= 10.00
1,2-Benzisothiazol-3(2H)-one	2634-33-5	>= 0.005 - <= 0.05
reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3- one (3:1)	55965-84-9	> 0.0002 - < 0.0015
Other ingredients (non-hazardous) to 100%		

## SECTION 4. FIRST AID MEASURES

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**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

<b>General advice</b>	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
<b>Inhalation</b>	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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** No symptoms known or expected.

### 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

<b>Suitable</b>	Water spray, Carbon dioxide (CO <sub>2</sub> ), Foam, Sand
<b>Unsuitable</b>	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 (NO<sub>x</sub>)

### 5.3 Advice for firefighters

<b>Special protective equipment for firefighters</b>	In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit.
<b>Further information</b>	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



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**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** 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. Keep away from direct sunlight. Protect from frost.

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

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Spirotetramat	203313-25-1	1.4 mg/m3 (SK-SEN)		OES BCS*
Glycerine (Inhalable mist.)	56-81-5	10 mg/m3 (TWA)	12 2011	AU NOEL



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

### 8.2 Exposure controls

#### Respiratory protection

If product is handled while not enclosed, and if contact may occur: 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
Break through time	> 480 min
Glove thickness	> 0.4 mm
Protective index	Class 6
Directive	Protective gloves complying with EN 374.

#### 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

<b>Form</b>	suspension
<b>Colour</b>	white to light beige

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<b>Odour</b>	weak, characteristic
<b>Odour Threshold</b>	No data available
<b>pH</b>	4.0 - 5.0 (100 %) (23 °C)
<b>Melting point/range</b>	No data available
<b>Boiling Point</b>	No data available
<b>Flash point</b>	> 100 °C No flash point - Determination conducted up to the boiling point.
<b>Flammability</b>	No data available
<b>Auto-ignition temperature</b>	ca. 415 °C
<b>Thermal decomposition</b>	No data available
<b>Minimum ignition energy</b>	No data available
<b>Self-accelerating decomposition temperature (SADT)</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	ca. 1.07 g/cm <sup>3</sup> (20 °C)
<b>Water solubility</b>	miscible
<b>Partition coefficient: n-octanol/water</b>	Spirotetramat: log Pow: 2.5(pH 7)
<b>Viscosity, dynamic</b>	No data available
<b>Viscosity, kinematic</b>	No data available
<b>Surface tension</b>	44 mN/m (25 °C) Determined in the undiluted form.
<b>Oxidizing properties</b>	No oxidizing properties
<b>Explosivity</b>	Not explosive 92/69/EEC, A.14 / OECD 113
<b>9.2 Other information</b>	Further safety related physical-chemical data are not known.

### SECTION 10. STABILITY AND REACTIVITY



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<b>10.1 Reactivity</b>	Stable under normal conditions.
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>10.4 Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<b>10.5 Incompatible materials</b>	Strong bases, Strong acids, Strong oxidizing agents
<b>10.6 Hazardous decomposition products</b>	Thermal decomposition can lead to release of: Hydrogen cyanide (hydrocyanic acid) Carbon monoxide Nitrogen oxides (NO <sub>x</sub> )

### SECTION 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

<b>Acute oral toxicity</b>	LD50 (Rat) > 2,000 mg/kg
<b>Acute inhalation toxicity</b>	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.
<b>Acute dermal toxicity</b>	LD50 (Rat) > 4,000 mg/kg
<b>Skin corrosion/irritation</b>	No skin irritation (Rabbit)
<b>Serious eye damage/eye irritation</b>	Slight irritant effect - does not require labelling. (Rabbit)
<b>Respiratory or skin sensitisation</b>	Skin: 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.

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### 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 cause respiratory tract irritation.

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

#### Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 144 mg/l  
Exposure time: 48 h

#### Chronic toxicity to aquatic invertebrates

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



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

Triple-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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Do not burn empty containers or product.  
Do not reuse container for any other purpose.

## SECTION 14. TRANSPORT INFORMATION

### ADG

UN number	<b>3082</b>
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

AU01: Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;

- packagings that do not incorporate a receptacle exceeding 500 kg(L); or
- IBCs

### IMDG

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UN number	<b>3082</b>
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	<b>3082</b>
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: 94723

### SUSMP classification (Poison Schedule)

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

## SECTION 16. OTHER INFORMATION

**Trademark information** Engaze® is a Registered Trademark of the Bayer Group.

### 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

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	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.
TWA	Time weighted average
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.

**Reason for Revision:** Reviewed and updated for general editorial purposes.

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