

Bayer
Safety Data Sheet
Responsar® Beta Residual Insecticide



Version / NZ
102000006562

Revision Date 14.07.2017

SECTION 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Trade Name Responsar® Beta Residual Insecticide
Product code (UVP): 00998575

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

Bayer CropScience Pty Ltd
Level 1, 8 Redfern Rd,
Hawthorn East, Vic 3123
Australia
www.environmentalscience.bayer.com.au

New Zealand Agent

Bayer New Zealand Ltd
3 Argus Place, Hillcrest, Auckland,
0627 New Zealand
Telephone: 0800 428 246
Facsimile: (09) 441 8645

1.4 Emergency telephone no.

Emergency telephone no. 0800 734 607 IXOM Operations Pty Ltd (24 hr)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with New Zealand Regulation

Hazardous classification: Classified as hazardous according to the criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

Signal word: Danger

HSNO classifications 6.1C (All), 6.1C (I), 6.1D (O), 6.3B, 6.4A, 6.5B, 6.8C, 6.9A (All), 9.1A (All), 9.1A (C), 9.1A (F), 9.3C, 9.4A.
Toxic in contact with skin or if inhaled.
Harmful if swallowed,
Causes mild skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause harm to breast-fed children.
May cause organ damage from repeated oral exposure.
Very toxic to aquatic life.
Harmful to terrestrial vertebrates.
Very toxic to terrestrial invertebrates.

Pictograms:



Bayer
Safety Data Sheet
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Classification in accordance with Australian GHS Regulation

Acute toxicity: Category 4
H302 Harmful if swallowed

Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life

Chronic aquatic Toxicity: Category 1
H410 Very toxic to aquatic life with long-lasting effects

Dangerous goods classification: "Dangerous goods" for transport according to NZS 5433:1999, UN, IMDG or IATA - See Section 14.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Beta-cyfluthrin 125 g/L Suspension concentrate (SC)

Chemical Name	CAS-No.	Concentration [%]
Beta-cyfluthrin	68359-37-5	11.60
Alkylaryl polyglycol ether	104376-75-2	> 1.00 - < 25.00
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one	55965-84-9	> 0.0002 - < 0.0015
1,2-Benzisothiazol-3(2H)-one	2634-33-5	> 0.005 - < 0.05
Glycerine	56-81-5	> 1.00
Silica, amorphe	7631-86-9	> 1.00
Other ingredients (non-hazardous) to 100 %		

SECTION 4. FIRST AID MEASURES

In case of poisoning by any exposure route contact the National Poisons and Hazardous Chemicals Information Centre, P.O. Box 913, Dunedin. Phone 0800 764 766, 0800 POISON 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

Immediately wash with plenty of soap and water for at least 15 minutes. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. In case of skin irritation, application of oils or lotions containing vitamin E may be considered. 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. Warm water may



increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. Apply soothing eye drops, if needed anaesthetic eye drops. Get medical attention if irritation develops and persists.

Ingestion

Rinse out mouth and give water in small sips to drink. Do NOT induce vomiting. Do not leave victim unattended. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Local: Skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours, Skin, eye and mucous membrane irritation, Cough, Sneezing

Systemic: Discomfort in the chest, Tachycardia, Hypotension, Nausea, Abdominal pain, Diarrhoea, Vomiting, Blurred vision, Headache, anorexia, Somnolence, Coma, Convulsions, Tremors, Prostration, Airway hyperreaction, Pulmonary oedema, Palpitation, Muscular fasciculation, Apathy, Dizziness

4.3 Indication of any immediate medical attention and special treatment needed

Risks

This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

Treatment

Systemic treatment: Initial treatment: symptomatic. Monitor: respiratory and cardiac functions. 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. Keep respiratory tract clear. Oxygen or artificial respiration if needed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Contraindication: derivatives of adrenaline. There is no specific antidote. Recovery is spontaneous and without sequelae.

In case of skin irritation, application of oils or lotions containing vitamin E may be considered.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

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

5.2 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), Carbon monoxide (CO), Nitrogen oxides (NO_x).

5.3 Advice for firefighters

Special protective equipment 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

Avoid contact with spilled product or contaminated surfaces. Contain the spread of the fire-fighting media. Do not allow run-off from fire-fighting to enter drains or water courses. 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.



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. Use personal protective equipment. When dealing with a spillage do not eat, drink or smoke. Keep unauthorized people away.

6.2 Environmental precautions

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. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated gloves, including the inside, before re-use. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt). Remove soiled clothing immediately and clean thoroughly before using again.

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. Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place.

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
Beta-cyfluthrin	68359-37-5	0.01 mg/m ³ (TWAEV)		OES BCS*
Glycerine (Inhalable mist.)	56-81-5	10 mg/m ³ (TWA)	12 2011	AU NOEL
Silica, amorphe (Respirable dust.)	7631-86-9	2 mg/m ³ (TWA)	12 2011	AU NOEL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

8.2 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

Respiratory protection is not required under anticipated circumstances of exposure. 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
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

If product is handled while not enclosed, and if contact may occur: Complete suit protecting against chemicals.



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 beige
pH	4.0 - 5.0 at 100 % (23 °C)
Boiling point/boiling range	ca. 100 °C
Flash point	>100 °C
	No flash point - Determination conducted up to the boiling point.
Auto-ignition temperature	430 °C
Density	ca. 1.08 g/cm ³ at 20 °C
Water solubility	Miscible
Partition coefficient: n-octanol/water	Beta-cyfluthrin: log Pow: 6.18 at 22 °C
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 Store only in the original container

10.6 Hazardous decomposition products No decomposition products expected under normal conditions of use.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity LD50 (Rat) 960 mg/kg
Test conducted with a similar formulation.

Bayer
Safety Data Sheet
Responsar® Beta Residual Insecticide



Version / NZ
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Acute inhalation toxicity	LC50 (Rat) > 1.761 mg/l Exposure time: 4 h Highest attainable concentration. Determined in the form of respirable aerosol. Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (Rat) > 2,000 mg/kg Test conducted with a similar formulation.
Skin irritation	No skin irritation (Rabbit) Test conducted with a similar formulation.
Eye irritation	Slight irritant effect - does not require labelling. (Rabbit) Test conducted with a similar formulation.
Sensitisation	Non-sensitizing (Guinea pig) OECD Test Guideline 406, Buehler test Test conducted with a similar formulation.

Assessment mutagenicity

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

Assessment carcinogenicity

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

Assessment toxicity to reproduction

Cyfluthrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Cyfluthrin is related to parental toxicity.

Assessment developmental toxicity

Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Cyfluthrin are related to maternal toxicity.

Assessment STOT Specific target organ toxicity – repeated exposure

The toxic effects of Cyfluthrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Aspiration hazard

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

Information on likely routes of exposure

Toxic if swallowed or inhaled
May cause skin irritation.
May cause eye irritation.

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

Bayer
Safety Data Sheet
Responsar® Beta Residual Insecticide



Version / NZ
102000006562

Revision Date 14.07.2017

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.

HSNO classifications

6.1C (All), 6.1C (I), 6.1D (O), 6.3B, 6.4A, 6.5B, 6.8C, 6.9A (All)

Toxic in contact with skin or if inhaled.

Harmful if swallowed,

Causes mild skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause harm to breast-fed children.

May cause organ damage from repeated oral exposure.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

LC50 (*Oncorhynchus mykiss* (rainbow trout)) 0.00176 mg/l

Exposure time: 96 h

Test conducted with a similar formulation.

Toxicity to aquatic invertebrates

EC50 (*Daphnia magna* (Water flea)) 0.0036 mg/l

Exposure time: 48 h

Test conducted with a similar formulation.

Toxicity to aquatic plants

IC50 (*Desmodesmus subspicatus* (green algae)) > 0.01 mg/l

Exposure time: 72 h

The value mentioned relates to the active ingredient beta-cyfluthrin.

No acute toxicity was observed at its limit of water solubility.

Toxicity to other organisms

LD50 (*Coturnix japonica* (Japanese quail)) > 2,000 mg/kg

The value mentioned relates to the active ingredient beta-cyfluthrin.

12.2 Persistence and degradability

Biodegradability

Beta-Cyfluthrin: Not rapidly biodegradable

Koc Beta-Cyfluthrin: Koc: 508 - 3179

12.3 Bioaccumulative potential

Bioaccumulation

Beta-Cyfluthrin: Bioconcentration factor (BCF) 506

Does not bioaccumulate.



12.4 Mobility in soil

Mobility in soil

Beta-Cyfluthrin: Immobile in soil

12.5 Other adverse effects

Additional ecological information

No other effects to be mentioned.

HSNO classifications

9.1A (All), 9.1A (C), 9.1A (F), 9.3C, 9.4A.

Very toxic to aquatic life.

Harmful to terrestrial vertebrates.

Very toxic to terrestrial invertebrates.

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.

SECTION 14. TRANSPORT INFORMATION

ADG

UN-Number	3082
Class	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BETA-CYFLUTHRIN 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
Class	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BETA-CYFLUTHRIN SOLUTION)

IATA

UN-Number	3082
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Environmental Hazard mark	YES



Description of the goods

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S. (BETA-CYFLUTHRIN SOLUTION)

SECTION 15. REGULATORY INFORMATION

EPA approval number

APPROVED PURSUANT TO THE HSNO ACT 1996, No.
HSR000275
See www.epa.govt.nz for approval controls.

MPI Approved maintenance compound Insecticide Type B (All animal products except dairy)
www.foodsafety.govt.nz

See also Section 2.

SECTION 16. OTHER INFORMATION

Trademark information

Responsar® is a registered trademark of Bayer.

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.

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	International Convention for the prevention of marine pollution from ships

Bayer
Safety Data Sheet
Responsar® Beta Residual Insecticide



Version / NZ
102000006562

Revision Date 14.07.2017

N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
OES BCS	Internal Bayer CropScience "Occupational Exposure Standard"
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 notation: Absorption through the skin may be a significant source of exposure.
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	Time Weighted Average
UN	United Nations
WHO	World Health Organisation

END OF SDS