

# Bayer Environmental Science

## Safety Data Sheet

### Tempo® Residual Insecticide



Version / NZ  
102000007418

Revision Date: 18.07.2012

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

Product name: **Tempo® Residual Insecticide**  
Other names: None  
Product code (UVP): 05113962  
Recommended use: Insecticide

Chemical formulation: Suspension concentrate (=flowable concentrate)(SC)

Company: Bayer New Zealand Limited  
3 Argus Place  
Glenfield  
Auckland  
New Zealand

Telephone: 0800 227 012  
Facsimile: 0800 227 011  
Website: www.bayeres.com.au  
Emergency telephone no.: 0800 734 607 Orica SH&E Shared Services (24 hr)

#### SECTION 2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE	Emergency Overview	DANGEROUS GOODS
Hazardous classification:	Classified as hazardous according to the criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.	
HSNO classifications:	6.8C, 6.9B (All), 9.1A (All), 9.1A (C), 9.1.A (F), 9.4A. May cause harm to breast-fed children. May cause organ damage from repeated oral exposure. Very toxic to aquatic life with long lasting effects. Very toxic to terrestrial invertebrates.	
GHS pictograms:		
Signal words:	Warning.	
R-phrases(s):	R23/25 - Toxic by inhalation and if swallowed. R43 - May cause sensitization by skin contact. R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	
S-phrases(s):	See sections 4, 5, 6, 7, 8, 10, 13.	
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 25 g/L

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Chemical Name	CAS-No.	Concentration [%]
Cyfluthrin	68359-37-5	2.20
Sulphuric acid	7664-93-9	0.05
Mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon and 2-Methyl-2H-isothiazol-3-on	55965-84-9	0.20
Glycerine	56-81-5	10.00
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.**

##### Workplace facilities

Ensure washing facilities are available.

##### Skin contact

Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. In case of skin irritation, application of oils or lotions containing vitamin E may be considered.

##### 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.

##### Notes to physician

##### Symptoms

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, dizziness, blurred vision, headache, anorexia, somnolence, coma, convulsions, tremors, prostration, airway hyperreaction, pulmonary oedema, palpitation, muscular fasciculation, apathy.

##### Risks

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

##### Treatment

Local treatment: Initial treatment: Symptomatic.

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.

## SECTION 5. FIRE FIGHTING MEASURES

### Suitable extinguishing media

Water spray  
Carbon dioxide (CO<sub>2</sub>)  
Foam  
Sand

### Hazards from combustion products

In the event of fire the following may be released:  
Hydrogen chloride (HCl)  
Hydrogen cyanide (hydrocyanic acid)  
Hydrogen fluoride  
Carbon monoxide (CO)  
Nitrogen oxides (NO<sub>x</sub>)

### Precautions for fire-fighting

In the event of fire and/or explosion do not breathe fumes.  
In the event of fire, wear self-contained breathing apparatus.  
Wear self-contained breathing apparatus and protective suit.  
Contain the spread of the fire-fighting media.  
Do not allow run-off from fire fighting to enter drains or water courses.

**Hazchem Code** •3Z

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Avoid contact with spilled product or contaminated surfaces.  
Use personal protective equipment.  
When dealing with a spillage do not eat, drink or smoke.

### 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.

### 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.

- For quantities up to 50 L of product bury in a secure approved landfill site.
- For quantities greater than 50 L seek advice from the manufacturer (use emergency contact number) before attempting disposal. Contain in a secure location until disposal method is established.



Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.

**Additional advice**

Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

**SECTION 7. HANDLING AND STORAGE**

**Handling**

Hygiene measures:

- Avoid contact with skin, eyes and clothing.
- Keep working clothes separately.
- Remove soiled clothing immediately and clean thoroughly before using again.
- Garments that cannot be cleaned must be destroyed (burnt).
- Wash hands before breaks and immediately after handling the product.

**Approved handler**

This product must be under the control of an approved handler when:

- a) applied in a wide dispersive manner; or
- b) used by a commercial contractor.

**Storage**

Requirements for storage areas and containers:

- 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**

**Components with workplace control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Glycerine (mist)	56-81-5	10 mg/m <sup>3</sup> (TWA)	09 2010	OHS WES NZ
Sulphuric acid	7664-93-9	1 mg/m <sup>3</sup> (TWA)	09 2010	OHS WES NZ
Sulphuric acid	7664-93-9	0.1 mg/m <sup>3</sup> (TWA)		OES BCS

For further details on the Occupational Exposure Standards, see Section 16.

Biological limit values: None

**Personal protective equipment - End user**

Respiratory protection: No personal respiratory protective equipment normally required.

Hand protection: Elbow-length PVC or nitrile gloves.

Skin and body protection: Cotton overall buttoned to the neck and wrist.  
Washable hat

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#### Engineering controls

Advice on safe handling:

Use only in area provided with appropriate exhaust ventilation.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance

Form: Liquid, suspension  
Colour: Grey white  
Odour: Weak, characteristic

#### Safety data

pH: 3.0 - 7.0 at 100 % (23 °C)

Flash point: > 100 °C  
No flash point - Determination conducted up to the boiling point.

Ignition temperature: No data available

Upper explosion limit: No data available

Lower explosion limit: No data available

Vapour pressure: No data available

Relative vapour density: No data available

Density: ca. 1.14 g/cm<sup>3</sup> at 20 °C

Water solubility: Miscible

Partition coefficient: n-octanol/water: No data available

### SECTION 10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions.

Conditions to avoid: Extreme heat and fire.

Materials to avoid: Strong acids  
Bases  
Strong oxidizing agents

Hazardous decomposition products: Thermal decomposition can lead to release of:  
Hydrogen chloride (HCl)  
Hydrogen cyanide (hydrocyanic acid)  
Hydrogen fluoride  
Carbon monoxide  
nitrogen oxides (NO<sub>x</sub>)

Hazardous reactions: No hazardous reactions when stored and handled according to prescribed instructions.



## SECTION 11. TOXICOLOGICAL INFORMATION

### Potential health effects

Inhalation:	Toxic by inhalation. May cause irritation of the mucous membranes.
Skin:	May cause skin irritation.
Eye:	May cause eye irritation.
Ingestion:	Toxic if swallowed.

### Animal toxicity studies

Acute oral toxicity:	LD <sub>50</sub> (rat) > 2,500 mg/kg
Acute inhalation toxicity:	LC <sub>50</sub> (rat) > 4.524 mg/L Exposure time: 4 h Determined in the form of a respirable aerosol. Highest attainable concentration.
Acute dermal toxicity:	LD <sub>50</sub> (rat) > 4,000 mg/kg
Skin irritation:	No skin irritation (rabbit).
Eye irritation:	No eye irritation (rabbit).
Sensitisation:	Non-sensitizing (guinea pig). OECD Test Guideline 406, Magnusson & Kligman test

### HSNO classifications

6.8C, 6.9B.

May cause harm to breast-fed children.

May cause organ damage from repeated oral exposure.

### 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 general 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.

### Chronic toxicity

Cyfluthrin caused clinical signs of toxicity including neurological symptoms and effects on the thyroid in chronic studies on rats and dogs.



**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects**

- Toxicity to fish: LC<sub>50</sub> (*Oncorhynchus mykiss* (Rainbow trout)) 0,068 µg/L  
Exposure time: 96 h  
The value mentioned relates to the active ingredient beta-cyfluthrin.
- Toxicity to aquatic invertebrates: EC<sub>50</sub> (*Daphnia magna* (Water flea)) 0,29 µg/L  
Exposure time: 48 h  
The value mentioned relates to the active ingredient beta-cyfluthrin.
- Toxicity to aquatic plants: IC<sub>50</sub> (*Desmodemus subspicatus*) > 0.01 mg/L  
Growth rate 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: LD<sub>50</sub> (*Coturnix japonica* (Japanese quail)) > 2,000 mg/kg  
The value mentioned relates to the active ingredient beta-cyfluthrin.
- Biodegradability: Readily biodegradable.  
The value mentioned relates to the active ingredient beta-cyfluthrin.

**HSNO classifications**

- 9.1A, 9.4A.  
Very toxic to aquatic life with long lasting effects.  
Very toxic to terrestrial invertebrates.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Product**

Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

**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, LIQUID, N.O.S. (BETA-CYFLUTHRIN SOLUTION) |
| Hazchem Code             | •3Z  |

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**IMDG**

UN-Number	<b>3082</b>
Class	9
Subsidiary Risk	None
Packaging group	III
EmS	F-A , S-F
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN SOLUTION)

**IATA**

UN-Number	<b>3082</b>
Class	9
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN SOLUTION )

**SECTION 15. REGULATORY INFORMATION**

EPA approval number: APPROVED PURSUANT TO THE HSNO ACT 1996, No. HSR000274.  
See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls.

ACVM approval: NZFSA Approved Type B (All animal product except dairy).

See also Section 2.

**SECTION 16. OTHER INFORMATION**

**Trademark information**

Tempo® is registered trademark of the Bayer Group.

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.



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**Further details on the Occupational Exposure Standards mentioned in Section 8:**

CEILING: Ceiling Limit Value

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.

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.

SKIN\_DES: Skin notation: Absorption through the skin may be a significant source of exposure.

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.

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

END OF SDS