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

1.1 Product identifier

Trade name	TEMPRID 75 RESIDUAL INSECTICIDE
Product code (UVP)	79726996

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

Use	Insecticide
EPA-Nr.	HSR100720

1.3 Details of the supplier of the safety data sheet

Supplier	Bayer CropScience Pty Ltd Level 1, 8 Redfern Road, Hawthorn East, Vic 3123 Australia
Telephone	+61 3 9248 6612
Telefax	+61 3 9248 6800
Local agent	Bayer New Zealand Limited 3 Argus Place Hillcrest Auckland 0627 New Zealand Telephone: 0800 428 246 Telefax: (09) 441 8645

1.4 Emergency telephone no.

Emergency Number	0800 734 607 (24hr)
Global Incident Response Hotline (24h)	+1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

6.1D
H302 Harmful if swallowed.
H332 Harmful if inhaled.

6.3B
H316 Causes mild skin irritation.

6.5B
H317 May cause an allergic skin reaction.

6.8C
H362 May cause harm to breast-fed children.

6.9B
H373 May cause damage to organs through prolonged or repeated exposure if inhaled or swallowed.

9.1A
H410 Very toxic to aquatic life with long lasting effects.

9.2B
H422 Toxic to the soil environment.

9.3B
H432 Toxic to terrestrial vertebrates.

9.4A
H441 Very toxic to terrestrial invertebrates.

2.2 Label elements

Labelling in accordance with Hazardous Substances Identification Regulations 2001

Hazard label for supply/use required.

Signal word: Warning

Hazard statements

H302 + H332	Harmful if swallowed or if inhaled.
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H362	May cause harm to breast-fed children.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled or swallowed.
H410	Very toxic to aquatic life with long lasting effects.
H422	Toxic to the soil environment.
H432	Toxic to terrestrial vertebrates.
H441	Very toxic to terrestrial invertebrates.

Precautionary statements

P102	Keep out of reach of children.
P201	Obtain special instructions before use.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P273	Avoid release to the environment.
P308 + P311	IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
P391	Collect spillage.
P501	Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Suspension concentrate (=flowable concentrate)(SC)
Beta-Cyfluthrin 25 g/L, Imidacloprid 50 g/L

Hazardous components

Name	CAS-No.	Conc. [%]
Beta-Cyfluthrin	68359-37-5	2.31
Imidacloprid	138261-41-3	4.63
Glycerine	56-81-5	> 10 – <= 30
Sulfonated aromatic polymer, sodium salt	68425-94-5	> 1 – < 10
1,2-Benzisothiazol-3(2H)-one	2634-33-5	> 0.05 – < 1

Further information

Beta-Cyfluthrin	68359-37-5	M-Factor: 10,000 (acute)
Imidacloprid	138261-41-3	M-Factor: 10 (acute), 10 (chronic)

SECTION 4: FIRST AID MEASURES

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

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, 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.

Contact the National Poisons and Hazardous Chemicals Information center in Dunedin, PO Box 913, Dunedin. Phone 0800 POISON (0800 764 766).

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable

Water spray, Carbon dioxide (CO2), Foam, Dry chemical

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 (NOx)

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

Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

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.

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

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

Refer to the label and/or leaflet.

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/m3 (TWA)		OES BCS*
Imidacloprid	138261-41-3	0.7 mg/m3 (TWA)		OES BCS*
Glycerine (Mist.)	56-81-5	10 mg/m3 (TWA)	06 2016	NZ OEL

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

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.
If product is handled while not enclosed, and if contact may occur: Complete suit protecting against chemicals

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	suspension
Colour	light beige to light brown
pH	4.5 - 7.0 at 100 % (23 °C)
Density	ca. 1.08 g/cm³ at 20 °C
Partition coefficient: n-octanol/water	Beta-Cyfluthrin: log Pow: 6.18 at 22 °C

	Imidacloprid: log Pow: 0.57
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 acids, Strong bases, Strong oxidizing agents
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) > 1,044 mg/kg Test conducted with a similar formulation.
Acute inhalation toxicity	LC50 (Rat) > 2.03 mg/l Exposure time: 4 h Highest attainable concentration. Determined in the form of liquid aerosol. Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (Rat) > 2,000 mg/kg Test conducted with a similar formulation.
Skin irritation	slight irritation (Rabbit) The value mentioned relates to the active ingredient beta-cyfluthrin. No skin irritation (Rabbit) The value mentioned relates to the active ingredient imidacloprid.
Eye irritation	Mild eye irritation. (Rabbit) The value mentioned relates to the active ingredient beta-cyfluthrin. No eye irritation (Rabbit) The value mentioned relates to the active ingredient imidacloprid.
Sensitisation	Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Magnusson & Kligman test The value mentioned relates to the active ingredient beta-cyfluthrin. Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Magnusson & Kligman test The value mentioned relates to the active ingredient imidacloprid.

Assessment STOT Specific target organ toxicity – single exposure

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

Assessment STOT Specific target organ toxicity – repeated exposure

Imidacloprid did not cause specific target organ toxicity in experimental animal studies.
The toxic effects of Cyfluthrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Assessment mutagenicity

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

Assessment carcinogenicity

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

Assessment toxicity to reproduction

Imidacloprid 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 Imidacloprid is related to parental toxicity.
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

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

Aspiration hazard

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

Further information

No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 0.068 µg/l Exposure time: 96 h The value mentioned relates to the active ingredient beta-cyfluthrin.
	LC50 (Oncorhynchus mykiss (rainbow trout)) 211 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient imidacloprid.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 0.29 µg/L Exposure time: 48 h The value mentioned relates to the active ingredient beta-cyfluthrin.
	EC50 (Daphnia magna (Water flea)) 85 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient imidacloprid.

	LC50 (Chironomus riparius (non-biting midge)) 0.0552 mg/l Exposure time: 24 h The value mentioned relates to the active ingredient imidacloprid.
Chronic toxicity to aquatic invertebrates	EC10 (Chironomus riparius (non-biting midge)): 2,09 µg/l Exposure time: 28 d The value mentioned relates to the active ingredient imidacloprid.
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. IC50 (Desmodesmus subspicatus (green algae)) > 10 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient imidacloprid.

12.2 Persistence and degradability

Biodegradability	Beta-Cyfluthrin: Not rapidly biodegradable Imidacloprid: Not rapidly biodegradable
Koc	Beta-Cyfluthrin: Koc: 508 - 3179 Imidacloprid: Koc: 225

12.3 Bioaccumulative potential

Bioaccumulation	Beta-Cyfluthrin: Bioconcentration factor (BCF) 506 Does not bioaccumulate. Imidacloprid: Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil	Beta-Cyfluthrin: Immobile in soil Imidacloprid: Moderately mobile in soils

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment	Beta-Cyfluthrin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Imidacloprid: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

Additional ecological information	No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.
Contaminated packaging	Triple rinse containers. Recycle if possible. If allowed under local authority, burn if circumstances, especially wind direction permit, otherwise crush and bury in an approved local authority facility. Do not use container for any other purpose.

SECTION 14: TRANSPORT INFORMATION

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.

ADR/RID/ADN

14.1 UN number	**3082**
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN, IMIDACLOPRID SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazchem Code	3Z

IMDG

14.1 UN number	**3082**
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN, IMIDACLOPRID SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

IATA

14.1 UN number	**3082**
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN, IMIDACLOPRID SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

14.6 Special precautions for user
See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Further information

HSNO approval-Nr.	HSR100720
HSNO Controls	See www.epa.govt.nz
ACVM Condition	See www.foodsafety.govt.nz
Other product approvals	Approved Maintenance Compound Type B

SECTION 16: OTHER 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
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
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
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance of the product.

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