



SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name	Decis Options® Insecticide
Other names	none
Product code (UVP)	05952077
Chemical Group	pyrethroid
Recommended use	Insecticide
Chemical Formulation	Emulsifiable concentrate (EC)
Company	Bayer CropScience Pty Ltd –ABN 87 000 226 022 391-393 Tooronga Road, East Hawthorn Victoria 3123, Australia
Telephone	(03) 9248 6888
Technical Information Service	1800 804 479
Facsimile	(03) 9248 6800
Website	www.bayercropscience.com.au
Emergency telephone no.	1800 033 111 Orica SH&E Shared Services

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

HAZARDOUS SUBSTANCE

DANGEROUS GOODS

Hazardous classification	Hazardous (National Occupational Health and Safety Commission - NOHSC)
R-phrases(s)	R20/22 - Harmful by inhalation and if swallowed. R38 - Irritating to skin. R41 - Risk of serious damage to eyes. R65 - Harmful: may cause lung damage if swallowed.
S-phrases(s)	See sections 4, 5, 6, 7, 8, 10, 12, 13.
ADG Classification	"Dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. - See Section 14.
SUSMP classification (Poison Schedule)	Schedule 6 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature
 Deltamethrin 27.5 g/l

Chemical Name	CAS-No.	Concentration [%]
Deltamethrin	52918-63-5	3.02
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	89.12
Naphthalene	91-20-3	>= 5.00 - < 10.00
2,6-Di-tert-butyl-4-methylphenol	128-37-0	0.10
Other ingredients (non-hazardous) to		



100%		
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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.

Inhalation

Move the victim to fresh air and keep at rest. Oxygen or artificial respiration if needed. Call a physician or poison control center immediately.

Skin contact

Take off contaminated clothing and shoes immediately. 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. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned. If symptoms persist, call a physician.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Apply soothing eye drops, if needed anaesthetic eye drops. Call a physician or poison control center immediately.

Ingestion

Rinse out mouth and give water in small sips to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Notes to physician

Symptoms

Local:, Skin and eye paraesthesia which may be severe, Skin, eye and mucous membrane irritation, Inhalation may provoke the following symptoms:, Irritation, Systemic:, Excitement, Gastrointestinal discomfort, Tremors, Dizziness, Headache, Apathy, Nausea, Vomiting, Abdominal pain, Muscular fasciculation, Pulmonary oedema, Unconsciousness, Convulsions, Coma

Risks

Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

Treatment

Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate.

In case of aspiration intubation and bronchial lavage should be considered.

There is no specific antidote.

Treat symptomatically.

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

In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens.

Contraindication: atropine.

Recovery is spontaneous and without sequelae.

Watch for pulmonary edema, which may develop in serious cases of poisoning even after 24-48 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media



Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Hazards from combustion products

In the event of fire the following may be released:

- Carbon dioxide (CO₂)
- Carbon monoxide (CO)
- Nitrogen oxides (NO_x)
- Hydrogen bromide (HBr)

Precautions for fire-fighting

- Wear self-contained breathing apparatus and protective suit.
- 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

Personal precautions

- Avoid contact with spilled product or contaminated surfaces.
- When dealing with a spillage do not eat, drink or smoke.
- Remove all sources of ignition.
- Use personal protective equipment.
- Keep unauthorized people away.

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.

Methods for cleaning up

- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
- Keep in suitable, closed containers for disposal.
- Clean contaminated floors and objects thoroughly, observing environmental regulations.

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

Handling

Hygiene measures

- Wash hands before breaks and immediately after handling the product.
- After each day's use, wash gloves, face shield or goggles and contaminated clothing.
- Remove soiled clothing immediately and clean thoroughly before using again.
- Before removing gloves clean them with soap and water.

Advice on protection against fire and explosion

- Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers

- Keep out of the reach of children.
- Keep containers tightly closed in a dry, cool and well-ventilated place.



Keep away from direct sunlight.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Flammability

C1 Combustible Liquids Flash Point > 60 °C - <= 150 °C

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
Naphthalene	91-20-3	10 ppm (TWA)		OES BCS
Naphthalene	91-20-3	52 mg/m ³ / 10 ppm (TWA)	08 2005	AU OEL
Naphthalene	91-20-3	79 mg/m ³ / 15 ppm (STEL)	08 2005	AU OEL
2,6-Di-tert-butyl-4-methylphenol	128-37-0	10 mg/m ³ (TWA)	08 2005	AU OEL
2,6-Di-tert-butyl-4-methylphenol	128-37-0	2 mg/m ³ (TLV)		OES BCS

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

Biological limit values
none

Personal protective equipment - End user

Respiratory protection AS/NZS 1715/1716 approved respirator
Use respiratory protection for organic vapours.

Hand protection Elbow-length PVC or nitrile gloves

Eye protection Face-shield

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

Engineering Controls

Advice on safe handling

Use only in area provided with appropriate exhaust ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form Liquid, clear
Colour light yellow
Odour aromatic

Safety data

pH 4.5 - 7.0 at 5 % (23 °C)

Flash point 67 °C



Ignition temperature	> 400 °C
Upper explosion limit	7 %(V) The data refer to the solvent.
Lower explosion limit	0.6 %(V) The data refer to the solvent.
Vapour pressure	3 hPa at 38 °C The data refer to the solvent.
Relative vapour density	no data available
Density	ca. 0.91 g/cm ³ at 20 °C
Water solubility	emulsifiable
Partition coefficient: n-octanol/water	no data available

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to avoid	Heat, flames and sparks.
Materials to avoid	Oxidizing agents Strong acids Bases
Hazardous Decomposition Products	Thermal decomposition can lead to release of: Oxides of carbon Bromine compounds Nitrogen oxides (NOx)
Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Inhalation	Harmful if inhaled. May cause irritation of the mucous membranes.
Skin	Irritating to skin. May cause sensitisation by skin contact. Can cause irritation to the skin resulting in effects such as burning and/or tingling sensation. A moderate skin irritant to abraded skin.
Eye	Severe eye irritation.
Ingestion	Harmful if swallowed. Small amounts of the solvent in this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury.



Acute oral toxicity	LD50 (rat) 535 mg/kg Test conducted with a similar formulation.
Acute inhalation toxicity	LC50 (rat) > 11.3 mg/l Exposure time: 6 h Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (rabbit) > 2,000 mg/kg Test conducted with a similar formulation.
Skin irritation	Slight irritation (rabbit) Test conducted with a similar formulation.
Eye irritation	Irritating to eyes. (rabbit) Test conducted with a similar formulation.
Sensitisation	Non-sensitizing. (guinea pig) Test conducted with a similar formulation.
Chronic toxicity	Deltamethrin caused neurobehavioral effects and/or neuropathological changes in animal studies. The toxic effects of Deltamethrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.
Assessment Mutagenicity	Deltamethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Assessment Carcinogenicity	Deltamethrin was not carcinogenic in lifetime feeding studies in rats and mice. This product contains $\geq 1\%$ naphthalene. Naphthalene caused an increased incidence of tumours after chronic inhalation of high vapour concentrations in the following organ: Respiratory Tract. The tumours seen with naphthalene were caused through a non-genotoxic mechanism, which is not relevant at low doses.
Assessment toxicity to reproduction	Deltamethrin did not cause reproductive toxicity in a two-generation study in rats.
Assessment developmental toxicity	Deltamethrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Deltamethrin are related to maternal toxicity.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 0.00091 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient deltamethrin.
Toxicity to fish	LC50 (Lepomis macrochirus (Bluegill sunfish)) 0.0014 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient deltamethrin.



Toxicity to aquatic invertebrates	EC50 (Daphnia) 0.00056 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient deltamethrin.
Toxicity to aquatic plants	EC50 (Selenastrum capricornutum) > 9.1 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient deltamethrin.
Toxicity to other organisms	(Anas platyrhynchos (Mallard duck)) > 4,640 mg/kg The value mentioned relates to the active ingredient deltamethrin.
Toxicity to other organisms	(Apis mellifera (bees)) The value mentioned relates to the active ingredient deltamethrin. Toxic to bees.
Biodegradability	Readily biodegradable. The value mentioned relates to the solvent.
Biodegradability	Readily biodegradable. The value mentioned relates to the active ingredient deltamethrin.
Stability in soil	in Field trial: DT50 23 d. Adsorbs on soil. The value mentioned relates to the active ingredient deltamethrin.
Bioaccumulation	Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 1,400 The value mentioned relates to the active ingredient deltamethrin.
Additional Environmental Information	no data available

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.

Refillable containers:

If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured. Empty container by pumping through dry-break connection system. Do not attempt to breach the valve system or the filling point, or contaminate the container with water or other products. Ensure that the coupler, pump, meter and hoses are disconnected, triple rinsed and drained after each use. When empty, or contents no longer required, return the container to the point of purchase. This container remains the property of Bayer CropScience Pty Ltd.

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.
(DELTAMETHRIN 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
EmS F-A , S-F
Marine pollutant YES
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(DELTAMETHRIN SOLUTION)

IATA

UN number 3082
Class 9
Subsidiary Risk None
Packaging group III
Environm. Hazardous Mark YES
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(DELTAMETHRIN SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994
Australian Pesticides and Veterinary Medicines Authority approval number: 51849
See also Section 2.

SECTION 16. OTHER INFORMATION

Trademark information Decis Options® is a 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.



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

CEILING: Ceiling Limit Value

OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

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