

Safety Data Sheet



K-Obiol® EC Combi Synergised Grain Protectant

Version 1 / AUS
102000028651

Revision Date: 28.09.2021
Print Date: 28.09.2021

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Trade name K-Obiol® EC Combi Synergised Grain Protectant
Product code (UVP) 81706182

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 1, 8 Redfern Road
3123 Hawthorn East
Victoria
Australia

Telephone (03) 9248 6888
Telefax (03) 9248 6800
Responsible Department 1800 804 479 Technical Information Service
Website www.es.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

Acute toxicity: Category 4

H302 Harmful if swallowed.

Aspiration hazard: Category 2

H304 May be fatal if swallowed and enters airways.

Eye Damage/Irritation: Category 1

H318 Causes serious eye damage.

Acute toxicity: Category 4

H332 Harmful if inhaled.

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.

2.2 Label elements



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Labelling according to specific Australian legislation

Hazardous components which must be listed on the label:

Deltamethrin
Piperonyl butoxide

Signal word: Danger

Hazard statements

H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing vapours.
P271 Use only outdoors or in a well-ventilated area.
P264 Wash hands thoroughly after handling.
P280 Wear eye protection/ face protection.
P270 Do not eat, drink or smoke when using this product.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/ physician.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor/physician if you feel unwell.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
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

Deltamethrin 50g/l, Piperonyl butoxide 400g/l
Emulsifiable concentrate (EC)

Chemical name	CAS-No.	Concentration [%]
Deltamethrin	52918-63-5	4.67
Piperonyl butoxide	51-03-6	37.40
Benzyl alcohol	100-51-6	<= 15.00
Tetrapropylene benzene sulfonate, calcium salt	11117-11-6	< 6.00
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	<= 20.00
Propylene carbonate	108-32-7	< 15.00



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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.

4.1 Description of first aid measures

Inhalation	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact	Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. 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. 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 mouth. 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
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4.3 Indication of any immediate medical attention and special treatment needed

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. 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.
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SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

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

Unsuitable High volume water jet

5.2 Special hazards arising from the substance or mixture Dangerous gases are evolved in the event of a fire.

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.

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. Remove all sources of ignition. Use personal protective equipment.

6.2 Environmental precautions Do not allow to get into surface water, drains and ground water.

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). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Inform appropriate authorities immediately if contamination occurs.

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 No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Advice on protection Keep away from heat and sources of ignition. Vapours may form



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- against fire and explosion** explosive mixture with air. Take measures to prevent the build up of electrostatic charge.
- Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. 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** Keep containers tightly closed in a cool, well-ventilated place. Store in a place accessible by authorized persons only. Store in original container. 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
2,6-Di-tert-butyl-4-methylphenol	128-37-0	10 mg/m ³ (TWA)	12 2011	AU NOEL
2,6-Di-tert-butyl-4-methylphenol	128-37-0	2 mg/m ³ (TLV)		OES BCS*
Piperonyl butoxide	51-03-6	50 ppm (TWA)		OES BCS*
Deltamethrin	52918-63-5	0.01 mg/m ³ (TWA)		OES BCS*

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

8.2 Exposure controls

Respiratory protection 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



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	Directive	Protective gloves complying with EN 374.
Eye protection		Wear goggles (conforming to EN166, Field of Use = 5 or equivalent) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).
Skin and body protection		Wear standard coveralls and Category 3 Type 6 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		No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	Liquid, clear
Colour	light yellow to brown
Odour	slight, naphthalene-like
Odour Threshold	No data available
pH	No data available
Melting point/range	No data available
Boiling Point	No data available
Flash point	103 °C
Flammability	No data available
Auto-ignition temperature	No data available
Thermal decomposition	Stable under normal conditions.
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available

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Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	ca. 1.07 g/cm ³ (20 °C)
Water solubility	No data available
Partition coefficient: n-octanol/water	Deltamethrin: log Pow: 6.4 (25 °C) Piperonyl butoxide: log Pow: 4.75
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	No data available
9.2 Other information	Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity	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) 710 mg/kg Test conducted with a similar formulation.
Acute inhalation toxicity	LC50 (Rat) 2.2 mg/l Exposure time: 4 h The value mentioned relates to the active ingredient deltamethrin. LC50 (Rat) > 5.9 mg/l Exposure time: 4 h The value mentioned relates to the active ingredient piperonyl butoxide.



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Acute dermal toxicity	LD50 (Rabbit) > 2,000 mg/kg Test conducted with a similar formulation.
Skin corrosion/irritation	No skin irritation (Rabbit) Test conducted with a similar formulation.
Serious eye damage/eye irritation	Irritating to eyes. (Rabbit) Test conducted with a similar formulation.
Respiratory or skin sensitisation	The results of a test on guinea pigs showed this substance to be a weak skin sensitiser. (Guinea pig) Test conducted with a similar formulation.

Assessment mutagenicity

Deltamethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Piperonyl butoxide 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.
Piperonyl butoxide was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Deltamethrin did not cause reproductive toxicity in a two-generation study in rats.
Piperonyl butoxide 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.
Piperonyl butoxide did not cause developmental toxicity in rats and rabbits.

Assessment STOT Specific target organ toxicity – single exposure

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

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

Assessment STOT Specific target organ toxicity – repeated exposure

Deltamethrin caused neurobehavioral effects and/or neuropathological changes in animal studies. The toxic effects of Deltamethrin are related to transient neurobehavioral effects typical for pyrethroid neurotoxicity.

Piperonyl butoxide did not cause specific target organ toxicity in experimental animal studies.

Aspiration hazard

May be fatal if swallowed and enters airways.

Information on likely routes of exposure

Irritating to skin.
Irritant
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



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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)) 0.15 µg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient deltamethrin.
(Cyprinodon variegatus (sheepshead minnow)) 3.94 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient piperonyl butoxide.

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 0.0131 µg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient deltamethrin.
EC50 (Daphnia magna (Water flea)) 0.51 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient piperonyl butoxide.

Toxicity to aquatic plants

EC50 (algae) > 9.1 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient deltamethrin.

12.2 Persistence and degradability

Biodegradability

Deltamethrin:
Not rapidly biodegradable
Piperonyl butoxide:
Not rapidly biodegradable

Koc

Deltamethrin: Koc: 10240000
Piperonyl butoxide: Koc: 399 - 830

12.3 Bioaccumulative potential

Bioaccumulation

Deltamethrin: Bioconcentration factor (BCF) 1,400
Does not bioaccumulate.
Piperonyl butoxide:
Potential bioaccumulation

12.4 Mobility in soil

Mobility in soil

Deltamethrin: Immobile in soil
Piperonyl butoxide: Moderately mobile in soils

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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.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number	3082
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN 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;

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

IMDG

UN number	3082
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. (DELTAMETHRIN SOLUTION)

IATA

UN number	3082
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. (DELTAMETHRIN SOLUTION)



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SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994
Australian Pesticides and Veterinary Medicines Authority approval number: 66921

SUSMP classification (Poison Schedule)

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

SECTION 16. OTHER INFORMATION

Trademark information K-Obiol® 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 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 sensitizer

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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.

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.

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