

SAFETY DATA SHEET



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1) IDENTIFICATION OF THE SUBSTANCE / PREPARATION

Commercial name: **K-OTHRINE[®] EC 15**

Usage: Insecticide

Company identification: Bayer (Pty.) Ltd.
Reg. No. 1968/011192/07
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SOUTH AFRICA

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Responsible department: Product Development and Regulatory Affairs
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In case of poisoning emergencies:
Bayer (office hours only): +27 11 921 5429/5471/5639
Tygerberg Poison Centre: +27 21 931 6129
Griffon Poison Information Centre: +27 82 446 8946

2) HAZARD IDENTIFICATION OF THE PRODUCT

Risk advice to man and the environment: Flammable.
Harmful by inhalation and if swallowed.
Irritating to respiratory system and skin.
Risk of serious damage to eyes.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Harmful: may cause lung damage if swallowed.

3) COMPOSITION / INFORMATION ON THE INGREDIENTS

Chemical nature:
Emulsifiable concentrate (EC)
Deltamethrin 15 g/l

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrases	Concentration [%]
Deltamethrin	52918-63-5	T, N	R50/53 R23/25	25.00
Tetrapropylene benzene sulfonate, calcium salt	11117-11-6 234-360-7	Xn	R21, R38, R41, R52/53	> 1,00 - < 25,00
2-Methylpropan-1-ol	78-83-1 201-148-0	Xi	R10, R37/38, R41, R67	> 1,00 - < 5,00
Solvent Naphtha (petroleum), light aromatic	64742-95-6 265-199-0	Xn, N	R10, R37, R51/53, R65, R66, R67	> 25,00

For the full text of the R-phrases mentioned in this Section, see Section 16.

4) FIRST AID MEASURES

General advice: Remove contaminated clothing immediately and dispose of safely.

Inhalation: Move the patient to fresh air and keep at rest. If symptoms persist, call a physician.

Skin contact: Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water for at least 15 min. 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. Get medical attention if irritation develops and persists.

Ingestion: Rinse out mouth and give water in small sips to drink. Do NOT induce vomiting. Risk of product entering the lungs on vomiting after ingestion. If swallowed, seek medical advice immediately and show this container or label.

Notes to physician:

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Symptoms: Local: Skin and eye paraesthesia which may be severe, usually transient with resolution within 24 hours. Eye and mucous membrane irritation, cough.
Systemic: Discomfort in the chest, tachycardia, hypotension, nausea, abdominal pain, diarrhoea, vomiting, dizziness, blurred vision, headache, anorexia, somnolence, coma, convulsions, tremors, prostration.

Risks: This product contains a pyrethroid.
Must NOT be confused with organophosphorus compounds!

Treatment: Local treatment: Initial treatment: symptomatic.
Systemic treatment: Initial treatment: symptomatic.
Monitoring of respiratory and cardiac functions.
Gastric lavage should be considered in cases of significant ingestions within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable.
Keep respiratory tract clear.
Give 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.

5) FIRE FIGHTING MEASURES

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

Extinguishing media which should not be used for safety reasons: High volume water jet.

Specific hazards during fire fighting: Dangerous gases are evolved in the event of a fire.

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus.

Further information: 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.

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.
Keep people away from and upwind of spill/leak.

Environmental precautions: Do not discharge into the drains/surface water/groundwater.

Methods for cleaning up: Keep in suitable, closed containers for disposal.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Clean floors and contaminated objects with plenty of water.

Additional advice: Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.
Check also for any local site procedures.

7) HANDLING AND STORAGE

Handling: Advice on safe handling.
No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice.
Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion: Keep away from heat and sources of ignition.
Vapours may form explosive mixture with air.

Storage: Store in a place accessible by authorized persons only.
Keep away from direct sunlight.
Keep containers tightly closed in a dry, cool and well-ventilated place.

Advice on common storage: Keep away from food, drink and animal feedingstuffs.

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8) EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
Deltamethrin	52918-63-5	0,02 mg/m ³		OES BCS*

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

Additional advice: Observe: Exposure Limits In Air, Group 3: 100 mg/m³/ 20 ppm. (aromatic-rich hydrocarbon mixes with > 25 % aromatics TRGS 901, No. 72).

Personal protective equipment:

In normal use and handling conditions: Impermeable gloves, face shield, respiratory protection.

In all other cases the following recommendations would apply:

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: Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness 0,40 mm). Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet.

Eye protection: Wear goggles conforming to EN166 (Field of Use 5 or equivalent).

Skin and body protection: Wear standard coverall and type 6 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.

Hygiene measures: When using, do not eat, drink or smoke.
Remove soiled clothing immediately and clean thoroughly before using again.
Wash hands immediately after work, if necessary take a shower.

9) PHYSICAL AND CHEMICAL PROPERTIES

Description: A clear, yellow, emulsifiable concentrate liquid.

Flash point: 48 °C

Ignition temperature: > 450 °C
The data refers to the solvent naphtha petroleum.

Upper explosion limit: 7,00 %(V)
The data refers to the solvent naphtha petroleum.

Lower explosion limit: 0,8 %(V)
The data refers to the solvent naphtha petroleum.

Relative vapour density: 1,00
The data refers to the solvent naphtha petroleum.

Density: Approx. 0,89 g/cm³ at 20 °C

Water solubility: Emulsifiable

Viscosity, kinematic: 1,09 mm²/s at 40 °C

Surface tension: 27,3 mN/m at 40 °C

10) STABILITY AND REACTIVITY

Conditions to avoid: Extremes of temperature and direct sunlight.

Hazardous reactions: No hazardous reactions when stored and handled according to prescribed instructions.
Stable under recommended storage conditions.

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11) TOXICOLOGICAL INFORMATION

Toxicity:

For the product an acute hazard unlikely in normal use.

LD₅₀ acute oral, rats: 431 mg/kg
LD₅₀ acute dermal, rats: > 2 000 mg/kg
LC₅₀ (4 hours) acute inhalation, rats: 2.69 mg/ℓ

Dermal irritation, rabbit: Irritating to skin

Eye irritation, rabbit: Severe eye irritant

Skin sensitization, guinea pig: Not a skin sensitizer
OECD Test Guideline 406, Buehler test

Further information: Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

The toxicological data refer to a similar formulation.

12) ECOLOGICAL INFORMATION

Elimination information (persistence and degradability):

Bioaccumulation: Bluegill sunfish
Bioconcentration factor (BCF): 1,400
Test substance: The value mentioned relates to the active ingredient deltamethrin.

Ecotoxicity effects:

Toxicity to fish:

LC₅₀: 0.00091 mg/ℓ Rainbow trout (*Oncorhynchus mykiss*). Exposure time: 96 h
The value mentioned relates to the active ingredient deltamethrin.

Toxicity to daphnia:

EC₅₀: 0.00056 mg/ℓ Water flea (*Daphnia magna*). Exposure time: 48 h
The value mentioned relates to the active ingredient deltamethrin.

Toxicity to algae:

EC₅₀: 1.7 mg/ℓ *Selenastrum capricornutum*. Exposure time: 96 h
Test conducted with a similar formulation.

13) DISPOSAL CONSIDERATIONS

Product: In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Contaminated packaging: Triple rinse containers.
Do not re-use empty containers.
Not completely emptied packagings should be disposed of as hazardous waste.

14) TRANSPORT INFORMATION

UN no.: 1993

Class: 3

Ems: F-E, S-E

Special provision: 640 E

Hazard no.: 30

Packaging group: III

Declaration for land shipment: 1993 FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)

Declaration for sea shipment: 1993 FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)

Declaration for shipment by air: 1993 FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)

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15) REGULATORY INFORMATION

Classification in accordance with the EC Directive on dangerous preparations 1999/45/EC as amended.

Classification: Hazard warning labelling compulsory.

Hazardous components which must be listed on the label: Deltamethrin

Symbol(s):

Xn: Harmful.

N: Dangerous for the environment.

R-phrases:

R10: Flammable.

R20/22: Harmful by inhalation and if swallowed.

R37/38: Irritating to respiratory system and skin.

R41: Risk of serious damage to eyes.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65: Harmful: may cause lung damage if swallowed.

S-phrases:

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S35: This material and its container must be disposed of in a safe way.

S39: Wear eye/face protection.

S57: Use appropriate container to avoid environmental contamination.

S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Exceptional labelling: To avoid risks to man and the environment, comply with the instructions for use.

WHO Classification: II (moderately hazardous)

16) OTHER INFORMATION

Text of R phrases mentioned in Section 3:

R10: Flammable.

R21: Harmful in contact with skin.

R23/25: Toxic by inhalation and if swallowed.

R37: Irritating to respiratory system.

R37/38: Irritating to respiratory system and skin.

R38: Irritating to skin.

R41: Risk of serious damage to eyes.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65: Harmful: May cause lung damage if swallowed.

R66: Repeated exposure may cause skin dryness or cracking.

R67: Vapours may cause drowsiness and dizziness.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

Consult the label for directions for use.

THIS INFORMATION CONCERNS ONLY THE PRODUCT AS CONFORMING TO ITS SPECIFICATIONS AND LIMITED TO THE USES HEREIN STATED.

This sheet complements the technical sheet of use but does not replace it. The information contained on this sheet is based on knowledge of the product on the date of publication. It is given in good faith.
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