



K-OTHRINE 2.5% WP, INDIA

Version 1 / IND
102000003175

1/10
Revision Date: 01.04.2015
Print Date: 24.01.2017

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

1.1 Product identifier

Trade name K-OTHRINE 2.5% WP, INDIA
Product code (UVP) 05946549

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 Limited
Bayer House, Central Avenue,
Hiranandani Estate
400607 Thane (W)
Maharashtra
India

Telephone +91-22-25311030 / 25311234

Telefax +91-22-25455116

1.4 Emergency telephone no.

Indian Emergency Number 022-25311885 (24 hours/day)

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

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

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.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

N Dangerous for the environment, R50/53

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Deltamethrin



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H410 Very toxic to aquatic life with long lasting effects.
 EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

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).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Chemical nature**

Wettable powder (WP)
 Deltamethrin 2.5% WP

Hazardous components

R-phrases according to EC directive 67/548/EEC
 Hazard statements according to Regulation (EC) No. 1907/2006

| Name | CAS-No. / EC-No. | Classification | | Conc. [%] |
|--------------|---------------------|----------------------------|--|-----------|
| | | EC Directive 67/548/EEC | Regulation (EC) No 1272/2008 | |
| Deltamethrin | 52918-63-5 | T; R23/25 N; R50/53 | Acute Tox. 3, H331 Acute Tox. 3, H301 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | 2.50 |

Further information

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

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General advice**

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Remove contaminated clothing immediately and dispose of safely.

Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.

Inhalation

Move the victim to fresh air and keep at rest. Call a physician or poison control center immediately.

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| 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 | Keep at rest. Rinse mouth. Do NOT induce vomiting. Risk of product entering the lungs on vomiting after ingestion. Call a physician or poison control center immediately. |

4.2 Most important symptoms and effects, both acute and delayed

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| 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 |
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4.3 Indication of any immediate medical attention and special treatment needed

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| 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: FIREFIGHTING MEASURES**5.1 Extinguishing media**

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| Suitable | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable | High volume water jet |
| Hazchem Code | 2Z |



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| 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 fire-fighters | In the event of fire and/or explosion do not breathe fumes. 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. |

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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| Precautions | Keep people away from and upwind of spill/leak. Avoid dust formation. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. |
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6.3 Methods and materials for containment and cleaning up

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| Methods for cleaning up | Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect and transfer the product into a properly labelled and tightly closed container. Clean floors and contaminated objects with plenty of water. |
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| Additional advice | Check also for any local site procedures. |
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| 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. |
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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

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| Advice on safe handling | No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Avoid dust formation. Ensure adequate ventilation. |
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| Advice on protection against fire and explosion | Dust may form explosive mixture in air. |
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| Hygiene measures | When using, do not eat, drink or smoke. Remove soiled clothing immediately and clean thoroughly before using again. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Wash hands immediately after work, if necessary take a shower. |
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7.2 Conditions for safe storage, including any incompatibilities

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| Requirements for storage areas and containers | Keep out of the reach of children. 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. |
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| Components | CAS-No. | Control parameters | Update | Basis |
|--------------|------------|---------------------------------|--------|----------|
| Deltamethrin | 52918-63-5 | 0.02 mg/m ³ (TWA) | | OES BCS* |

*OES BCS: Internal Bayer CropScience "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

Wear respirator with a particle filter mask (protection factor 4) conforming to European norm EN149FFP1 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 of 0,4 mm). Wash when contaminated and 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.

Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

| | |
|---|-------------------------------------|
| Form | powder |
| Colour | white to light beige |
| Odour | weak, characteristic |
| pH | not applicable |
| Flammability (solid, gas) | The product is not flammable. |
| Bulk density | 340 - 380 kg/m ³ (loose) |
| Water solubility | dispersible |
| Partition coefficient: n-octanol/water | Deltamethrin: log Pow: 6.4 at 25 °C |
| Oxidizing properties | No oxidizing properties |

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Information given is based on data on the components and the toxicology of similar products.**Acute inhalation toxicity** LC50 (rat) > 20.0 mg/l**Acute dermal toxicity** LD50 (rat) > 4,000 mg/kg**Skin irritation** Slight irritant effect - does not require labelling. (rabbit)**Eye irritation** Slight irritant effect - does not require labelling. (rabbit)**Sensitisation** Non-sensitizing. (guinea pig)
The information is derived from the properties of the individual components.**Assessment repeated dose 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.

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.

Further information

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However,

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these sensations cause no lesions and are of a transitory nature (max. 24 hours).

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.

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.

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

Koc Deltamethrin: Koc: 10240000

12.3 Bioaccumulative potential

Bioaccumulation Deltamethrin: Bioconcentration factor (BCF) 1,400
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Moderately mobile in soils

Mobility in soil Deltamethrin: Immobile in soil

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Deltamethrin: 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 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.
Do not empty into drains.

Contaminated packaging Empty remaining contents.
Do not re-use empty containers.
Not completely emptied packagings should be disposed of as hazardous waste.
Packagings must be taken to a contractor licensed for disposal of hazardous waste.

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29.3 Date-expired and off-specification pesticides**SECTION 14: TRANSPORT INFORMATION****ADR/RID/ADN**

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|---------------------------------|---|
| 14.1 UN number | 3077 |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DELTAMETHRIN MIXTURE) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packing group | III |
| 14.5 Environm. Hazardous Mark | YES |
| Hazard no. | 90 |
| Hazchem Code | 2Z |
| Tunnel Code | E |

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG

| | |
|---------------------------------|---|
| 14.1 UN number | 3077 |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DELTAMETHRIN MIXTURE) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packing group | III |
| 14.5 Marine pollutant | YES |

IATA

| | |
|---------------------------------|--|
| 14.1 UN number | 3077 |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DELTAMETHRIN MIXTURE) |
| 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 73/78 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**

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WHO-classification: III (Slightly hazardous)

Labeling according to Insecticide Rules 1971 as amended. (INDIA)

Class II: Highly toxic
 Colour: bright yellow
 Poison!
 Keep out of the reach of children.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: OTHER INFORMATION**Text of R-phrases mentioned in Section 3**

R23/25 Toxic by inhalation and if swallowed.
 R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Text of the hazard statements mentioned in Section 3

H301 Toxic if swallowed.
 H331 Toxic if inhaled.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

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 |
| 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 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| TWA | Time weighted average |



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UN United Nations
WHO World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 453/2010 amending Regulation (EU) No 1907/2006 (and any subsequent amendments). This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

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