



KINGFOG, INDIA

Version 1 / IND
102000003213

1/11
Revision Date: 14.11.2016
Print Date: 24.01.2017

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

1.1 Product identifier

Trade name KINGFOG, INDIA
Product code (UVP) 05947030

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.

Aspiration hazard: Category 1
H304 May be fatal if swallowed and enters airways.

Flammable liquids: Category 3
H226 Flammable liquid and vapour.

Specific target organ toxicity - single exposure: Category 3
H335 May cause respiratory irritation.

Specific target organ toxicity - single exposure: Category 3
H336 May cause drowsiness or dizziness.

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

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



KINGFOG, INDIA

Version 1 / IND
102000003213

2/11
Revision Date: 14.11.2016
Print Date: 24.01.2017

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Deltamethrin
- Solvent Naphtha (petroleum), light aromatic



Signal word: Danger

Hazard statements

- H226 Flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H410 Very toxic to aquatic life with long lasting effects.
 EUH066 Repeated exposure may cause skin dryness or cracking.
 EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P240 Ground/bond container and receiving equipment.
 P280 Wear protective gloves/ protective clothing/ eye protection.
 P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
 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

Ultra-low volume (ULV) liquid (UL)
Deltamethrin 1.25% w/w UL

Hazardous components

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Deltamethrin	52918-63-5	Aquatic Chronic 1, H410 Aquatic Acute 1, H400 Acute Tox. 3, H301 Acute Tox. 3, H331	1.25
Solvent Naphtha	64742-95-6	Flam. Liq. 3, H226	> 25

**KINGFOG, INDIA**Version 1 / IND
1020000032133/11
Revision Date: 14.11.2016
Print Date: 24.01.2017

(petroleum), light aromatic	01-2119486773-24-xxxx	STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	
2,6-Di-tert-butyl-4-methylphenol	128-37-0 01-2119555270-46-xxxx	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	>= 0.10 – <= 0.25

Further information

Deltamethrin	52918-63-5	M-Factor: 1,000,000 (acute), 1,000,000 (chronic)
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For the full text of the H-Statements mentioned in this Section, see Section 16.

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
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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.
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KINGFOG, INDIA

Version 1 / IND
102000003213

4/11
Revision Date: 14.11.2016
Print Date: 24.01.2017

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.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

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

Unsuitable High volume water jet

Hazchem Code 3Y

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 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

Precautions Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.

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 floors and contaminated objects with plenty of water.

Additional advice Check also for any local site procedures.

**KINGFOG, INDIA**Version 1 / IND
1020000032135/11
Revision Date: 14.11.2016
Print Date: 24.01.2017

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 against fire and explosion Keep away from heat and sources of ignition. Vapours may form explosive mixture with air. Take measures to prevent the build up of electrostatic charge. Use only explosion-proof equipment.

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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Protect from freezing.

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

Suitable materials HDPE (high density polyethylene)

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
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 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

**KINGFOG, INDIA**Version 1 / IND
1020000032136/11
Revision Date: 14.11.2016
Print Date: 24.01.2017

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.
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.

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

Form	Liquid, clear
Colour	light yellow
Flash point	24.5 °C
Density	ca. 0.86 g/cm ³ at 20 °C
Partition coefficient: n-octanol/water	Deltamethrin: log Pow: 6.4 at 25 °C Solvent Naphtha (petroleum), light aromatic: Not applicable

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.



KINGFOG, INDIA

Version 1 / IND
102000003213

7/11
Revision Date: 14.11.2016
Print Date: 24.01.2017

- 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** ATE (Mix) > 2,000 mg/kg
- Acute inhalation toxicity** ATE (Mix) > 5.00 mg/l
Irritating to respiratory system.
- Acute dermal toxicity** ATE (Mix) > 2,000 mg/kg
- Skin irritation** No skin irritation (Rabbit)
- Eye irritation** No eye irritation (Rabbit)
- Sensitisation** Non-sensitizing. (Guinea pig)

Assessment STOT Specific target organ toxicity – single exposure

Solvent Naphtha (petroleum), light aromatic: May cause respiratory irritation., Solvent Naphtha (petroleum), light aromatic: May cause drowsiness or dizziness.

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 hyperactivity typical for pyrethroid neurotoxicity. Solvent Naphtha (petroleum), light aromatic: Based on available data, the classification criteria are not met.

Assessment mutagenicity

Deltamethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests. Solvent Naphtha (petroleum), light aromatic is not considered mutagenic.

Assessment carcinogenicity

Deltamethrin was not carcinogenic in lifetime feeding studies in rats and mice. Solvent Naphtha (petroleum), light aromatic: Based on available data, the classification criteria are not met.

Assessment toxicity to reproduction

Deltamethrin did not cause reproductive toxicity in a two-generation study in rats. Solvent Naphtha (petroleum), light aromatic: Based on available data, the classification criteria are not met.

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. Solvent Naphtha (petroleum), light aromatic: This information is not available.

Aspiration hazard

May be fatal if swallowed and enters airways.

**KINGFOG, INDIA**Version 1 / IND
1020000032138/11
Revision Date: 14.11.2016
Print Date: 24.01.2017**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 above values are calculated in accordance with Regulation (EC) 1272/2008.

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
Solvent Naphtha (petroleum), light aromatic:
rapidly biodegradable

Koc Deltamethrin: Koc: 10240000

12.3 Bioaccumulative potential

Bioaccumulation Deltamethrin: Bioconcentration factor (BCF) 1,400
Does not bioaccumulate.
Solvent Naphtha (petroleum), light aromatic:
No data available

12.4 Mobility in soil

Mobility in soil Deltamethrin: Immobile in soil
Solvent Naphtha (petroleum), light aromatic: Slightly mobile in soils

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).
Solvent Naphtha (petroleum), light aromatic: 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.

**KINGFOG, INDIA**Version 1 / IND
1020000032139/11
Revision Date: 14.11.2016
Print Date: 24.01.2017**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.

Contaminated packaging Empty remaining contents.
Do not re-use empty containers.
Dispose of as unused product.

Legal basis

Waste key in accordance with Schedule I of the Hazardous Waste Rules, 2008 as amended (India - EP Act):

29.1 Process wastes/residues
29.3 Date-expired and off-specification pesticides

SECTION 14: TRANSPORT INFORMATION**ADR/RID/ADN**

14.1 UN number	1993
14.2 Proper shipping name	FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	30
Hazchem Code	3Y
Tunnel Code	D/E
Special Provision	640E

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	1993
14.2 Proper shipping name	FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Marine pollutant	YES

IATA

14.1 UN number	1993
14.2 Proper shipping name	FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)
14.3 Transport hazard class(es)	3
14.4 Packing group	III

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006



KINGFOG, INDIA

Version 1 / IND
102000003213

10/11
Revision Date: 14.11.2016
Print Date: 24.01.2017

14.5 Environm. Hazardous Mark NO

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

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



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

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	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



KINGFOG, INDIA

Version 1 / IND
102000003213

11/11
Revision Date: 14.11.2016
Print Date: 24.01.2017

	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 information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 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.

Reason for Revision: The following sections have been revised: Section 2: Hazards Identification. Section 4: First Aid Measures. Section 9: Physical and Chemical Properties. Section 11: Toxicological Information. Section 12. Ecological information.

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