

# Eco-Chem Field Systems Ltd

Netaim 76870, Tel 972-3-9582695, 9651989, Fax: 972-3-9671966

E.mail: g\_talmor@zahav.net.il

## SAFETY DATA SHEET

### DRAGON

Revision date: 23.02.2017

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

##### Product identifiers

Product name: DRAGON  
Chemical name: Bifenthrin  
CAS No.: 82657-04-3

##### Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Insecticides for public health use

##### Details of the supplier of the safety data sheet

Supplier: ECO-CHEM FIELD SYSTEM LTD.  
Moshav Netaim  
768000, ISRAEL  
Tel: +972 3 9582695  
Fax: +972 3 9671966

Emergency telephone number : Tel: +972 4 7771900

#### SECTION 2: HAZARDS IDENTIFICATION

Acute tox 4  
Eye irrit. 2  
Skin sens.1  
STOT SE 3  
Carc. 2  
STOT RE 1  
Aq chronic 2



Pictogram(s):

Signal word: Danger

##### Hazard statement(s):

**H302:** May be harmful if swallowed  
**H305:** May be harmful if swallowed and enters airways  
**H319:** May cause serious eye irritation  
**H317:** May cause an allergic skin reaction  
**H351:** Suspected of causing cancer  
**H372:** Causes damage to organs through prolonged or repeated exposure  
**H411:** Toxic to aquatic life with long lasting effects

##### Precautionary statement(s):

**P260:** Do not breathe fumes/ gas/ mist/vapours/ spray  
**P280:** Wear protective gloves/clothing/eye protection/face protection  
**P301+P310:**

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IF SWALLOWED: Immediately call a POISON CENTER /doctor

**P304+P340:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**P312:** Call a POISON CENTER or doctor if you feel unwell

**P501:** Dispose of contents/container in accordance with local/regional/regulation

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS N°	g/litre	Signal word	H-Statements
Bifenthrin	82657-04-3	96	Danger	Acute tox 2 H300 Skin sens 1 H317 Acute tox 3: H331 STOT-RE 1 H372 (nervous system) Carc. 2: H351 Aq acute 1 H400 Aq. acute 1 H410
Hydrocarbons, C10-13, n-alkanes, isoalkanes, cyclics<2% aromatics	EC 920-901-0	250	Danger	Asp tox 1: H304 EUH066 Flam 4 H227
Emulsifiers	Mixture		Warning	Skin irrit 2: H315 Eye dam1: H318 Carc 2: H351 STOT SE 3: H335 Aq acute1 H400 Aq chronic 1 H410

## SECTION 4: FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre and follow the advice given. Show this Safety Data Sheet to a doctor.

**Ingestion:** Do not induce vomiting. Do not give liquids of any kind. Never give anything by mouth to an unconscious person. Consult a doctor immediately.

**Skin contact:** Remove contaminated clothing. Wash affected area with plenty of soap and water.

**Inhalation:** Remove to fresh air. If breathing is difficult or discomfort occurs and persists, seek medical attention.

**Eye contact:** Flush eyes with water for at least 15 minutes. If irritation occurs and persists, seek medical attention.

**Notes to physician:** This product contains light aromatic hydrocarbons that can produce a severe pneumonitis or pulmonary oedema if aspirated during vomiting. Consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is otherwise controlled.

## SECTION 5: FIRE FIGHTING MEASURES

**Extinguishing media:** Water fog, fine water spray, foam, dry chemical, carbon dioxide. Do not use water jet.

**Hazards from combustion** Do not breathe smoke, gases or vapours generated – carbon

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**products:** monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride.

**Advice for fire fighters:** Fire-fighters should wear full protective gear, including self-contained breathing apparatus. Keep unnecessary people away. Use water spray to cool containers.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Wear PPE as recommended in section 8. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid contact with spilled material or contaminated surfaces. Keep people and animals away.

**Environmental precautions:** Prevent product from entering drains or water courses. Warn the local water authority if water-courses become contaminated.

**Clean-up methods:** Pick up and arrange disposal without creating aerosol. Contain spill and absorb with earth, sand, clay, or other absorbent material, collect and store in sealed drums for safe disposal. Decontaminate the area and equipment by washing areas with water. Keep in suitable, closed containers for disposal. Contaminated extinguishing water must be disposed of in accordance with official regulations.

## SECTION 7: HANDLING AND STORAGE

**Handling:** Keep out of reach of children. Irritating to eyes. Avoid breathing vapour or spray. For product in eyes, wash immediately with water. For product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

**Storage:** Store between 5-30°C in the closed original container, in a cool, dry, well-ventilated area, away from direct sunlight and sources of ignition.

**Incompatibility:** Incompatible with acids.

**Flammability:** Not flammable under normal conditions of use. The product does not sustain combustion.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational Exposure limits:**  
Hydrotreated Light Petroleum (as hydrocarbon vapour):  
200 mg/m<sup>3</sup> TWA

**Engineering controls:** Use only in well-ventilated areas. If necessary, use local exhaust ventilation to keep airborne concentration below exposure limits.

**Personal protective equipment:**  
Wear face shield or goggles.  
Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat, heavy-duty shoes or boots.  
Wear elbow length butyl rubber gloves.

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If working in a poorly ventilated area or if occupational exposure levels are likely to be exceeded, wear a respirator with filter for vapours.

After each day's use, wash gloves, goggles or face shield, respirator if worn, and contaminated clothing.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- |                      |                     |
|----------------------|---------------------|
| a) Appearance:       | Milky white liquid  |
| b) pH:               | 5.5-6.5 AT 25°C     |
| c) Relative density: | 0.095-1.005 AT 25°C |

## SECTION 10: STABILITY AND REACTIVITY

- |   |   |
|---|---|
| <b>Reactivity</b>                         | Stable under normal conditions of use. Will not polymerise.               |
| <b>Chemical stability</b>                 | The product is stable if stored and handled as prescribed /indicated.     |
| <b>Possibility of hazardous reactions</b> | No hazardous reactions when stored and handled according to instructions. |
| <b>Conditions to avoid</b>                | Sources of ignition and extreme heat.                                     |
| <b>Incompatible materials</b>             | None currently known.   |
| <b>Hazardous decomposition Products:</b>  | Carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride. |

## SECTION 11: TOXICOLOGICAL INFORMATION

- |                                     |  |
|-------------------------------------|--|
| <b>Oral toxicity:</b>               | LD <sub>50</sub> rat: >300-2000 mg/kg (GHS Cat 4)          |
| <b>Dermal toxicity:</b>             | LD <sub>50</sub> rat: >2000- 5000 mg/kg (GHS Cat 5)        |
| <b>Inhalation toxicity:</b>         | LC <sub>50</sub> rat (4 h) >1.01 mg/L (technical material) |
| <b>Skin irritation:</b>             | Mild irritant (not sufficient for classification)          |
| <b>Eye irritation:</b>              | irritant   |
| <b>Skin sensitisation:</b>          | May cause skin sensitisation                               |
| <b>WHO Toxicity classification:</b> | II, moderately hazardous                                   |

Based on laboratory evidence from studies in mice, formation of tumours were observed. Not mutagenic or reproductive toxicity.

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## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity** (technical material)

<b>Bird toxicity:</b>	LD <sub>50</sub> Bobwhite quail	1800 mg/kg
<b>Fish toxicity:</b>	LC <sub>50</sub> 96 h rainbow trout	0.00026 mg/L
<b>Daphnia toxicity:</b>	EC <sub>50</sub> 48 h <i>Daphnia magna</i>	0.00011 mg/L
<b>Algal toxicity:</b>	EC <sub>50</sub> 72h Green algae	0.822 mg/L

Bifenthrin is only slightly toxic to both waterfowl and upland game birds. Bifenthrin is highly toxic to fish and aquatic arthropods. However, its low water solubility and strong adsorption to soil help to minimise impact in aquatic systems under field conditions.

<b>Bees:</b>	LD <sub>50</sub> : (Oral)	0.1 µg/bee
	(Contact)	0.015 µg/bee

Toxic to bees

<b>Environmental fate:</b>	Soil DT <sub>50</sub>	65 - 125 d
	Soil K <sub>oc</sub>	1.31 - 3.02 x 10 <sup>5</sup>

Bifenthrin has moderate stability in soil under aerobic conditions and is stable under a wide range of pHs. Bifenthrin has a high log P<sub>ow</sub> and high affinity for organic matter. It is not mobile in soil and so should not move into ground water. There is potential for bifenthrin to bioaccumulate (BCF 1703).

## SECTION 13: DISPOSAL CONSIDERATIONS

Do not contaminate ponds, waterways or ditches with chemical or used containers. Empty containers should be washed and discarded. Empty containers should not be used for other purposes. Disposal should be in accordance with local, state or national legislation.

## SECTION 14: TRANSPORTATION INFORMATION

<b>UN number:</b>	3082		
<b>UN Proper Shipping Name:</b>	Environmentally hazardous substance, liquid, N.O.S. (contains bifenthrin)		
<b>Transport hazard class:</b>	ADR/RID: 9	IMDG: 9	IATA: 9
<b>Packaging group:</b>	ADR/RID: III	IMDG: III	IATA: III
<b>Environmental hazard:</b>	ADR/RID: Yes	IMDG: Marine pollutant: Yes	IATA: Yes

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## SECTION 15: REGULATORY INFORMATION

No additional regulatory information required for this product.

## SECTION 16: OTHER INFORMATION

### Additional relevant H-statements:

These phrases are for hazardous components in the product but are not at levels that require H statements. They provide additional information on risks.

### H- statements:

<b>H300</b>	Fatal if swallowed
<b>H302</b>	Harmful if swallowed
<b>H304</b>	May be fatal if swallowed and enter airways
<b>H315</b>	Causes skin irritation
<b>H317</b>	May cause an allergic skin reaction
<b>H318</b>	Causes serious eye damage
<b>H319</b>	Causes serious eye irritation
<b>H331</b>	Toxic if inhaled
<b>H335</b>	May cause respiratory irritation
<b>H351</b>	May cause cancer
<b>H372</b>	Causes damage to organs through prolonged or repeated exposure
<b>H400</b>	Very toxic to aquatic life
<b>H410</b>	Very toxic to aquatic life with long lasting effects
<b>H411</b>	Toxic to aquatic life with long lasting effects

TWA: Time weighted average: average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

No liability is accepted for any injury, loss, damage or cost arising directly or indirectly from the use of the product or from the use of information contained within the safety data sheet since the customer's handling of the product is necessarily beyond our control. The supplied data are based on current knowledge and experience. This safety data sheet is intended to describe our product in terms of safety requirements. The customer should determine by appropriate trials that the product is suitable for his intended use.

### Reason for revision:

Updates to sections 2, 3, 9, 11, 16

Supersedes version issued 16.05.2013

Sections 9, 11 and 12 based on available EU and own data.

Self-classification of mixture (studies/calculation)