



**Material Safety Data Sheet**  
**CONCEPT™ LIQUID INSECTICIDE**

MSDS Number: 102000011078  
 MSDS Version 2.0  
 Revision Date: 04/29/2011  
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**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product name** CONCEPT™ LIQUID INSECTICIDE  
**MSDS Number** 102000011078  
**PCP Registration No.** 29611

Bayer CropScience Inc  
 #200, 160 Quarry Park Blvd, SE  
 Calgary, Alberta T2C 3G3  
 Canada

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)  
 For Product Information call: 1-888-283-6847

**SECTION 2. HAZARDS IDENTIFICATION**

*NOTE: Please refer to Section 11 for detailed toxicological information.*

**Emergency Overview** Warning! Hazard to humans and domestic animals. Keep out of the reach of children. Harmful if swallowed or absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling.

**Physical State** suspension liquid

**Odor** weak characteristic

**Appearance** white

**Exposure routes** Inhalation, Skin contact, Ingestion

**Immediate Effects**

**Eye** Causes eye irritation. Avoid contact with eyes.

**Skin** Harmful if absorbed through skin. Avoid contact with skin, eyes and clothing.

**Ingestion** Harmful if swallowed. Do not take internally.

**Inhalation** May cause irritation. Avoid breathing spray mist.

**Potential Environmental Effect** Extremely toxic to fish and aquatic organisms. Highly toxic to bees.



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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Imidacloprid	138261-41-3	7.65
Deltamethrin	52918-63-5	1.02
2-Ethylhexanol propylene ethyleneglycol ether	64366-70-7	20.00
2-Ethylhexanole	104-76-7	4.50

**SECTION 4. FIRST AID MEASURES**

<b>General</b>	<p>Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.</p> <p>When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.</p>
<b>Eye</b>	<p>Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.</p>
<b>Skin</b>	<p>Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.</p>
<b>Ingestion</b>	<p>Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.</p>
<b>Inhalation</b>	<p>Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.</p>
<b>Notes to physician</b>	
<b>Hazards</b>	<p>This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.</p>
<b>Treatment</b>	<p>In case of skin irritation, application of oils or lotions containing vitamin E may be considered.</p> <p>Treat symptomatically. 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.</p>



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#### SECTION 5. FIRE FIGHTING MEASURES

<b>Flash point</b>	104 °C / 219 °F
<b>Autoignition temperature</b>	385 °C / 725 °F
<b>Lower Flammability Limit</b>	no data available
<b>Upper Flammability Limit</b>	no data available
<b>Explosiveness</b>	Not explosive 92/69/EEC, A.14 / OECD 113
<b>Fire and Explosion Hazards</b>	In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid) Carbon monoxide (CO) Hydrogen chloride (HCl) nitrogen oxides (NOx)
<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable extinguishing media</b>	High volume water jet
<b>Fire Fighting Instructions</b>	Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.  In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
<b>Dust Explosion Class</b>	no data available

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.
<b>Methods for cleaning up</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.
<b>Additional advice</b>	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**

- Handling procedures** Use only in area provided with appropriate exhaust ventilation.
- Storing Procedures** Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Store in a place accessible by authorized persons only. Store bulk material and packed materials in a closed warehouse or under cover protected against direct sunlight and frost.
- Keep away from food, drink and animal feedingstuffs.
- Work/Hygienic Procedures** 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).

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

- General Protection** Follow all label instructions. Train employees in safe use of the product.
- Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
- Eye/Face Protection** Tightly fitting safety goggles
- Hand protection** Chemical resistant nitrile rubber gloves
- Body Protection** Wear long-sleeved shirt and long pants and shoes plus socks.
- Respiratory protection** When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

**Exposure Limits**

Imidacloprid	138261-41-3	OES BCS*	TWA	0.7 mg/m3
Deltamethrin	52918-63-5	OES BCS*	TWA	0.02 mg/m3

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

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MSDS Version 2.0**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	white
<b>Physical State</b>	suspension liquid
<b>Odor</b>	weak characteristic
<b>pH</b>	3.5 - 6.0 (1 %) at 23 °C
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Density</b>	ca. 0.98 g/cm <sup>3</sup> at 20 °C
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	no data available
<b>Melting / Freezing Point</b>	no data available
<b>Water solubility</b>	dispersible
<b>Minimum Ignition Energy</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	no data available

**SECTION 10. STABILITY AND REACTIVITY**

<b>Conditions to avoid</b>	no data available
<b>Incompatibility</b>	no data available
<b>Hazardous Decomposition Products</b>	no data available
<b>Hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>Chemical Stability</b>	Stable under recommended storage conditions.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the two technical-grade active ingredients.



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**Acute oral toxicity** rat: LD50: 2,500 mg/kg

**Acute dermal toxicity** rat: LD50: > 4,000 mg/kg

**Acute inhalation toxicity** rat: LC50: > 5.383 mg/l  
 Exposure time: 4 h  
 Determined in the form of a respirable aerosol.  
 Highest attainable concentration.

**Skin irritation** rabbit: No skin irritation

**Eye irritation** rabbit: Irritating to eyes.

**Sensitisation** guinea pig: Non-sensitizing.  
 OECD Test Guideline 406, Magnusson & Kligman test

**Chronic toxicity** Imidacloprid caused thyroid and/or liver effects in chronic dietary studies in rats and dogs.

Deltamethrin caused neurobehavioral effects (e.g., tremors) in chronic toxicity studies in rats and dogs.

**Assessment Carcinogenicity**

Imidacloprid was not carcinogenic in studies in rats and mice.

Deltamethrin was not carcinogenic in lifetime feeding studies in rats and mice.

**ACGIH**

None.

**NTP**

None.

**IARC**

Deltamethrin

52918-63-5

Overall evaluation: 3

**OSHA**

None.

**Reproductive toxicity**

REPRODUCTION: Imidacloprid was not a reproductive toxicant in a multi-generation study in rats.

Deltamethrin was not a reproductive toxicant in multi-generation reproduction studies in rats.

DEVELOPMENTAL TOXICITY: Imidacloprid is not considered a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.

Deltamethrin was not a primary developmental toxicant in developmental toxicity studies in rats and rabbits. Developmental effects (e.g., delayed ossifications) were observed in rabbits at the high-dose but were considered secondary to



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maternal toxicity.

**Assessment neurotoxicity**

Imidacloprid showed slight behavioral and activity changes only at the highest dose tested in neurotoxicity studies in rats. There were no correlating morphological changes observed in the neural tissues.

Deltamethrin caused neurobehavioral effects (e.g., tremors) without correlating neuropathological changes in acute and subchronic neurotoxicity screening studies in rats. In a developmental neurotoxicity screening study in rats, developmental landmarks were delayed in male offspring at the maternally toxic high-dose.

**Mutagenicity**

Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Deltamethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**SECTION 12. ECOLOGICAL INFORMATION**

**Toxicity to fish**

Rainbow trout (*Oncorhynchus mykiss*)  
 LC50: 211 mg/l  
 Exposure time: 96 h  
 The value mentioned relates to the active ingredient imidacloprid.

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

**Toxicity to aquatic plants**

*Desmodemus subspicatus*  
 Growth rate  
 EC50: > 10 mg/l  
 Exposure time: 72 h  
 The value mentioned relates to the active ingredient imidacloprid.

Algae  
 Growth rate  
 EC50: > 9.1 mg/l  
 Exposure time: 96 h  
 The value mentioned relates to the active ingredient deltamethrin.

**Acute Toxicity to Aquatic Invertebrates**

Water flea (*Daphnia magna*)  
 EC50: 85 mg/l  
 Exposure time: 48 h  
 The value mentioned relates to the active ingredient imidacloprid.

*Chironomus riparius* (non-biting midge)  
 LC50: 0.0552 mg/l



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Exposure time: 24 h  
 The value mentioned relates to the active ingredient imidacloprid.

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

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

**SECTION 13. DISPOSAL CONSIDERATIONS**

**General Disposal Guidance** Dispose in accordance with all local, state/provincial and federal regulations.

**Container Disposal** Not completely emptied packagings should be disposed of as hazardous waste.

**SECTION 14. TRANSPORT INFORMATION**

**TDG** Not dangerous goods / not hazardous material

**49CFR** Not dangerous goods / not hazardous material

**IMDG**

UN-Number **3082**  
 Class 9  
 Packaging group III  
 Marine pollutant YES  
 Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

**IATA**

UN-Number **3082**  
 Class 9  
 Packaging group III  
 Environm. Hazardous Mark YES  
 Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.







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**SECTION 16. OTHER INFORMATION**

NFPA 704 (National Fire Protection Association):

Health - 1      Flammability - 1      Reactivity - 0      Others - none

HMS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1      Flammability - 1      Physical Hazard - 0      PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: The following sections have been revised: Section 14: Transport Information. Section 16: Other Information.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

Revision Date: 04/29/2011

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