


Harvanta™ 50SL Insecticide

| SECTION 1. IDENTIFICATION | |
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| Product Name: | Harvanta™ 50SL Insecticide |
| Synonyms: | IKI-3106 50SL; Cyclaniliprole 50SL Insecticide |
| Chemical Name: | Cyclaniliprole; 3-bromo- <i>N</i> -[2-bromo-4-chloro-6-[[[(1-cyclopropylethyl) amino]carbonyl]phenyl]-1-(3-chloro-2-pyridinyl)-1 <i>H</i> -pyrazole-5-carboxamide (CAS) or 2',3-dibromo-4'-chloro-1-(3-chloro-2-pyridyl)-6'-{[(1 <i>RS</i>)-1-cyclopropylethyl]carbonyl}pyrazole-5-carboxanilide (IUPAC) |
| Chemical Family: | Anthranilic diamide; pyrazolylphenyl |
| Recommended Uses: | Agricultural industry: Insecticide |
| PMRA Registration No.: | 32889 |
| Company Identification: | ISK Biosciences Corporation 7470 Auburn Road, Suite A Concord, OH 44077-9703 (440) 357-4640 |
| 24 Hour Emergency Number: | For Transportation emergency, spills, leak, fire or accident call: CHEMTREC 1-800-424-9300 For Medical emergency call: 1-888-484-7546 |

| SECTION 2. HAZARDS IDENTIFICATION | |
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| Hazard Classification: | Flammable liquid (Category 4) Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 2) |
| Signal Word: | WARNING |
| Hazard Symbols: |  |
| Hazard Statements: | Combustible liquid. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. |
| Precautionary Statements: | Keep away from flames and hot surfaces. No smoking. Wear protective gloves and eye or face protection. In case of fire, use water spray, fog or foam to extinguish. Store in a well-ventilated place. Keep cool. Avoid release to the environment. Collect spillage. Dispose of contents and container in accordance with the product label. |

| SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS | | | |
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| Chemical Name: | CAS #: | % by Weight: | TLV/PEL: |
| Active Ingredient: Cyclaniliprole* | 1031756-98-5 | 4.55 | Not established |
| Dimethyl sulfoxide | 67-68-5 | 55 – 65 | Not established |
| Propylene glycol | 57-55-6 | 20 – 30 | Not established |
| * 3-bromo-N-[2-bromo-4-chloro-6-[[[(1-cyclopropylethyl) amino]carbonyl]phenyl]-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxamide (CA) | | | |

| SECTION 4. FIRST-AID MEASURES | |
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| Ingestion: | Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything to an unconscious person. |
| Skin Contact: | Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. |
| Eye Contact: | 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 poison control center or doctor for treatment advice. |
| Inhalation: | Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice. |
| Have the product container or label with you when calling a poison control center or doctor, or going for treatment. | |

| SECTION 5. FIRE-FIGHTING MEASURES | |
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| Extinguishing Media: | SMALL FIRE: Use water spray, dry chemicals, foam or carbon dioxide. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. |
| Unusual Fire and Explosion Hazards: | May decompose under fire conditions emitting gases and vapors such as hydrogen bromide, nitrous vapors, chlorine vapors, carbon monoxide and carbon dioxide which may be toxic and irritating to the respiratory tract. |
| Fire Fighting Instructions: | Wear full firefighting turn-out gear and self-contained breathing apparatus. |

| SECTION 6. ACCIDENTAL RELEASE MEASURES | |
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| Precautionary Measures: | Use protective equipment and engineering controls identified in section 8 of this document. |
| Containment and Clean-Up: | Contain spill. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Wash spillage area with water. Do not allow wash water to enter drains or surface waters. |

| SECTION 7. HANDLING AND STORAGE | |
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| Precautions: | Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. |
| Storage: | Store in original container, in a secured, dry and cool place separate from fertilizer, food, and feed. Avoid cross-contamination with other pesticides. |

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The recommendations in this section for exposure controls and Personal Protection are intended for industrial settings (such as formulation or packaging facilities) or for other non-application situations.

For additional information, refer to the precautions/warnings on the product label. Always follow the label instructions when handling and using this product.

Exposure Limits: Not established.

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Ensure that eyewash stations and safety showers are near work areas.

Personal Protection:

Ingestion: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Eye Contact: Where eye contact is possible, use protective eyewear (such as chemical splash goggles or a face shield).

Skin Contact: Where contact is likely, wear waterproof gloves, long-sleeved shirt and long pants, socks and chemical-resistant footwear.

Inhalation: A respirator is not normally required when handling sealed containers. Use effective engineering controls to comply with facility occupational exposure limits. In case of emergency spills, use a NIOSH-approved respirator with an organic vapor (OV) filter and any N, R, P, or HE pre-filter.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance: Transparent yellow liquid

Odor: Chemical odor

pH: 3 - 6

Boiling Point: Not available

Melting Point: Not available

Freezing Point: Not applicable

Flash Point: 83.5°C (182°F)

Evaporation Rate: Not available

Flammability: Combustible

Flammable Limits: Not available

Vapor Pressure: 2.4×10^{-6} Pa @ 25°C

Vapor Density: Not available

Density: 1.08 – 1.12 g/mL @ 20°C

Solubility: 0.15 mg/L in water @ 20°C

N-Octanol/Water: 557 (Log P_{ow} = 2.7)

Auto-Ignition Temperature: 272°C (522°F)

Decomposition Temperature: Not available

Volatility: Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity: No evidence of reactivity.

Stability: This product remains stable at 20°C over 24 months.

Possibility of Hazardous Reactions: None known.

SECTION 10. STABILITY AND REACTIVITY (continued)

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| Conditions to Avoid: | Extremes of temperature. |
| Incompatible Materials: | Strong oxidizing agents, strong acids or bases. |
| Hazardous Decomposition Products: | Hydrogen bromide, nitrous vapors, chlorine vapors, carbon monoxide and carbon dioxide. |

SECTION 11. TOXICOLOGICAL INFORMATION

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| Acute Toxicity: | Acute oral toxicity (LD ₅₀): > 2000 mg/kg [Rat]. Acute dermal toxicity (LD ₅₀): > 2000 mg/kg [Rat]. Acute inhalation toxicity (LC ₅₀): > 5.05 mg/L [actual airborne concentration]; > 19.0 mg/L (nominal) 4 hour(s) [Rat]. |
| Skin Irritation: | Non-irritating. Primary dermal irritation index = 0.0 [Rabbit] |
| Eye Irritation: | Slightly irritating. Slight redness and chemosis were observed immediately after installation to test animals. Significant discharge was also observed. All effects reversed within 48 hours without irrigation. [Rabbit] |
| Sensitization: | Not a contact sensitizer. |
| Mutagenicity: | No evidence of mutagenicity. |
| Carcinogenicity: | No adverse effects were seen in mice ingesting cyclanilprole in a 78-week feeding study. Dietary exposure to rats over two years showed thyroid effect in males ingesting over 6000 ppm but no carcinogenic effects in males or females at up to 20,000 ppm. |
| Reproductive Toxicity: | Animal studies show no significant evidence of reproductive toxicity at doses of cyclanilprole up to 20,000 ppm. |
| Target Organ Effects: | 90-day feeding studies showed increased liver, heart and ovary weights in female rats exposed to extreme doses of 20,000 ppm but such effects were not observed in a follow-up 1-year feeding study. Increased liver weights were observed in dogs fed over 1000 ppm but did not meet GHS guidelines for hazard classification. |
| Aspiration: | No data available. |

SECTION 12. ECOLOGICAL INFORMATION

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| Summary of Effects: | Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with local or regional permits. |
| Ecotoxicity Data: | Fish (Rainbow Trout) 96-hour LC ₅₀ = 361 mg/L [16.6 mg a.i./L] Fish (Carp) 96-hour LC ₅₀ = 876 mg/L [36.2 mg a.i./L] Invertebrate (<i>Daphnia magna</i>) 48-hour EC ₅₀ = 2.36 mg/L [0.0679 mg a.i./L] Algae (<i>Pseudokirchneriella subcapitata</i>) 96-hour E _r C ₅₀ > 1000 mg/L [> 48.3 mg a.i./L] Mysid shrimp (<i>Americamysis bahia</i>) 96-hour LC ₅₀ > 0.2 mg a.i./L Oyster (<i>Crassostrea virginica</i>) EC ₅₀ = 23 µg a.i./L Bobwhite Quail Acute LD ₅₀ > 2000 mg/kg body weight (practically non-toxic) Mallard Duck Acute LD ₅₀ > 2000 mg/kg body weight (practically non-toxic) Sub-Acute Dietary Bird LD ₅₀ > 5000 ppm in diet for both Quail and Mallard |

SECTION 12. ECOLOGICAL INFORMATION (continued)

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| Persistence / Degradability: | Cyclaniliprole degrades very slowly in soil. Half-lives of cyclaniliprole in soil ranged from 610 to 1728 days under both aerobic and anaerobic conditions. In water-sediment systems, total system half-lives for cyclaniliprole ranged from 495 to 854 days under both aerobic and anaerobic conditions. Cyclaniliprole is stable to hydrolysis. The main routes of dissipation are photolysis in water (half-life of 25.8 days (based on a 12-hour light/dark cycle) and photolysis in soil (half-lives of 1.2 to 1.4 days). |
| Bioaccumulative Potential: | Not expected to be bioaccumulative. Maximum experimentally derived BCF = 103. |
| Mobility in Soil: | Cyclaniliprole exhibits low to medium mobility in soil ($K_{foc} = 247 - 1380$ mL/g; K_{foc} arithmetic mean = 790 mL/g). |

SECTION 13. DISPOSAL CONSIDERATIONS

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| Waste Disposal: | For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills. |
| Container Disposal: | Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Follow provincial instruction for any required additional cleaning of the container prior to its disposal. Make the empty container unsuitable for further use. Dispose of the container in accordance with provincial requirements. |

SECTION 14. TRANSPORT INFORMATION

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| US DOT Classification: | CLASS 9. Not regulated when shipped in non-bulk packaging by highway or rail. | |
| | Non-bulk (Ground Transport) | Bulk (Ground Transport) |
| Proper Shipping Name: | Not regulated | Environmentally Hazardous Substance, Liquid, N.O.S. (Cyclaniliprole) |
| Hazard Class: | Not regulated | Class 9 |
| Identification Number: | Not regulated | UN 3082 |
| Packing Group: | Not regulated | PG III |
| Hazardous Substances Reportable Quantity: | Not applicable. | |
| Special Provisions for Transport: | Class 9 placard not required for non-bulk packaging transported by highway or rail within the U.S. [49CFR 172.504(f)(9)]. | |
| | IATA (Air Transport) | IMDG (Ocean Transport) |
| Proper Shipping Name: | Environmentally Hazardous Substance, Liquid, N.O.S. (Cyclaniliprole) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CYCLANILIPROLE) |
| Hazard Class: | Class 9 | CLASS 9 |
| Identification Number: | UN 3082 | UN 3082 |
| Packing Group: | PG III | PG III |

SECTION 15. REGULATORY INFORMATION

U.S. Federal and State Regulations:

SARA 313 Inventory Ingredients: Not Listed

SARA 312 Hazards Classification: Not Listed

Listed as carcinogen by:

IARC: Not Listed

NTP: Not Listed

OSHA: Not Listed

CA Prop 65: Not Listed

TSCA: Exempt

Canada (PMRA): Registered under PCP No. 32889

This chemical is a pesticide product registered by the Pest Management Regulatory Agency and is subject to certain labeling requirements under federal law. PMRA requirements can differ from GHS classification criteria and hazard information required for safety data sheets in Section 2. Following is the hazard information as required by PMRA on the pesticide label:

DO NOT take internally. Harmful if swallowed. Avoid contact with eyes. Avoid prolonged contact with skin. Wash exposed areas of skin thoroughly with soap and warm water after handling or using. Remove contaminated clothing and wash before re-use. Avoid breathing spray mist. This product is toxic to aquatic organisms, certain beneficial insects, bees and other pollinating insects exposed to direct treatment. Do not apply this product while bees or other pollinating insects are actively visiting the treatment area. Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal.

EU (Directives 67/548/EEC, 1999/45/EC and 2006/8/EC): R51/53: Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

SECTION 16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1

Flammability: 2

Instability: 0

0 Minimal

1 Slight

2 Moderate

3 Serious

4 Extreme

Notice to Reader

All information contained in this Safety Data Sheet is furnished free of charge and is intended for your evaluation. In our opinion, the information as of the date of the Safety Data Sheet is reliable; however, it is your responsibility to determine the suitability of the information for your use. You are advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional or variable conditions or circumstances exist or because of applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information gathered by you; and you must make independent determinations of the suitability and completeness of the information from all sources to assure both proper use of the material described herein and the safety and health of employees. Accordingly, no guarantee expressed or implied is made by ISK Biosciences Corporation as to the results to be obtained based upon your use of the information, nor does ISK Biosciences Corporation assume any liability arising out of your use of the information.

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