Chlorantraniliprole -MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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1. Chemical Product Identification

Product Name: Chlorantraniliprole

Molecular Formula: C₁₈H₁₄BrCl₂N₅O₂

Molecular Weight: 4483.15

Structural Formula:

Chemical Name: 3-bromo-N-[4-chloro-2-methyl-6-[(methylamino)carbonyl]

phenyl]-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxamide

Form: Fine crystalline powder

Color: Off-white

Odor: Not applicable CAS No.: 500008-45-7

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Chlorantraniliprole	500008-45-7	95.0
Other ingredients		5.0

3. Hazards Identification

Emergency Overview: When used as directed, this product does not present a hazard to humans or domestic animals.

Potential Health Effects: May cause transient eye irritation with tearing, pain or blurred vision.

4. First Aid Measures

If on skin: The material is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable.

If in eyes: The material is not likely to be hazardous to the eyes, but if contact occurs, flushing the eyes with plenty of water is advisable. Consult a physician if necessary.

If inhaled: No specific intervention is indicated as the material is not likely to be hazardous by inhalation. Consult a physician if necessary.

If swallowed: No specific intervention is indicated as the material is not likely to be hazardous by ingestion. Consult a physician if necessary.

5. Fire-Fighting Measures

Flammable Properties: Not a fire or explosion hazard.

Flash Point : >100°C

Extinguishing Media: Water spray, foam, dry chemical, CO₂.

Fire Fighting Instructions

If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

6. Accidental Release Measures

Safeguards (Personnel)

Note: review fire fighting measures and handling (personnel) sections before proceeding with clean-up. Use appropriate personal protective equipment during clean-up.

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus.

Initial Containment

Prevent material from entering sewers, waterways, or low areas. Follow applicable Federal, State/Provincial and Local laws/regulations.

Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material. Dispose of in an approved container. Do not allow to contaminate ground or surface water systems. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum.

7. Handling And Storage

Handling (Personnel): wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Storage: Do not contaminate water, food or feed by storage or disposal. Store above 32 F $(0^{\circ}C)$ Store product in original container only. Store in a cool, dry place. Do not store in or around the home. Store in a location inaccessible to children and pets.

8. Exposure Controls/Personal Protection

Engineering Controls

Keep container tightly closed. Use only with adequate ventilation.

Personal Protective Equipment

Applicators and other handlers must wear: Long-sleeved shirt, long pants, shoes plus socks.

After the product has been diluted in accordance with label directions for use, shirt, pants, socks, and shoes are sufficient personal protective equipment.

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear: Long-sleeved shirt, long pants,

shoes plus socks.

Applicable Exposure Limits

10 mg/m3, 8 & 12 Hr. TWA, total dust

5 mg/m3, 8 & 12 Hr. TWA, respirable dust

9. Physical and Chemical Properties

Appearance: White semi-viscous liquid.

Odor: Mild alcohol.

pH: 7.8

Viscosity: 583 cps @ 30-rpm

Density: 1.094 g/mL @20°C

10. Stability and Reactivity

Chemical Stability: Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials: None reasonably foreseeable.

Decomposition: Nitrogen oxides, carbon monoxide and unidentified organic compounds

may be formed upon combustion.

Polymerization:Polymerization will not occur.

11. Toxicological Information

Acute toxicity

Dermal LD50: > 5000 mg/kg in rats

Oral LD50: > 5000 mg/kg in rats

Inhalation LC50: > 2.0 mg/L in rats

Chlorantraniliproleis not a skin or eye irritant and is not a skin sensitizer in animals.

There were no adverse effects in subchronic feeding studies in rats, mice or dogs. There was a decreased body weight gain at high doses in a 28-day feeding study in mice and in a 28 day dermal study in rats.

Animal testing indicates Chlorantraniliprole Technical did not have carcinogenic, neurological, developmental or reproductive effects.

Tests have shown that Chlorantraniliprole Technical did not cause genetic damage in bacterial or mammalian cell cultures, or in animals.

12. Ecological and Ecotoxicological Information

96 hour LC50 for Rainbow trout: > 9.9 mg product/L (2.16 mg a.i./L)

96 hour LC50 for Bluegill sunfish: > 9.9 mg product/L (1.84 mg a.i./L)

48 hour EC50 for Daphnia magna: 35 ug product/L (7.1 ug a.i./L)

Acute Oral LD50 for Bobwhite Quail: > 2000 mg a.i./kg

Acute Dietary LC50 for Bobwhite Quail: > 5620 ppm a.i.

48 hr Oral LD50 for Honey bee: > 114 ug a.i./bee

48 hr Contact LD50 for Honey bee: > 100 ug a.i./bee

13. Disposal Considerations

Waste Disposal

Do not contaminate water supply, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Environmental hazards:

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to inter-tidal areas below the mean high water mark. Do not contaminate water when disposing of equipment rinsate. Do not apply where/when conditions could favor runoff. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

Container Disposal

For Plastic Containers: Triple rinse (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. For Metal Containers (non aerosol): Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved State and local procedures.

14. Transport Information

Not applicable.

15. Regulatory Information

Not applicable.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.