



ZHEJIANG RAYFULL CHEMICALS CO., LTD.

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MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO., LTD

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1. Chemical Product Identification

Product Name: Chlorantraniliprole 95% TC

Molecular Formula: $C_{18}H_{14}BrCl_2N_5O_2$

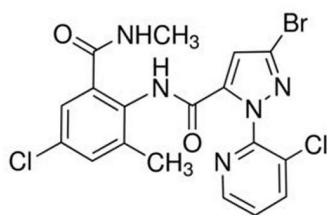
Molecular Weight: 483.15 g/mol

Chemical Name:

3-bromo-N-[4-chloro-2-methyl-6-[(methylamino)carbonyl]phenyl]-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxamide

CAS number: 500008-45-7

Structural name:



Form: Power

Colour: White to light yellow

Odour: Odourless

2. Composition/Information On Ingredients

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



3. Hazards Identification

Pictogram:



Signal Word: Warning

Hazard statement(s):

H410: Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P273: Avoid release to the environment.

P391: Collect spillage.

P501: Dispose of contents/container to an approved waste disposal plant.

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

Extinguishing media: Dry chemical or carbon dioxide for small fires, water spray or foam for large fires. Avoid heavy hose streams.

Special hazards arising from the substance or mixture: The essential breakdown products are volatile, toxic, irritant and inflammable compounds such as nitrogen oxides, hydrogen chloride, hydrogen bromide, carbon monoxide, carbon dioxide and various chlorinated and brominated organic compounds.

Advice for firefighters: Use water spray to keep fire-exposed containers cool. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Fight fire from



protected location or maximum possible distance. Dike area to prevent water runoff. Firemen should wear self-contained breathing apparatus and protective clothing.

6. Accidental Release Measures

Personal Precautions: Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Wear suitable protective clothing and eye protection to prevent skin and eye contact. Use adequate ventilation and wear an air-supplied respirator to prevent inhalation.

Procedures for dealing with release or spill: Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Sections 7 and 8. Pump or scoop large amounts of liquid into a disposable container. Absorb remaining liquid or smaller spills with clay, sand or vermiculite. Scoop or sweep up material and place into a disposal container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into compatible disposal container. On soils, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition. Spillages or uncontrolled discharges into watercourses must be alerted to the regulatory body.

7. Handling And Storage

Handling: 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: Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Do not store in or around the home. Store in a location inaccessible to children and pets.

8. Exposure Controls/Personal Protection

Exposure standards: No occupational exposure standards have been established for the product or its ingredients.

Engineering controls: This product is intended for use outdoors where engineering controls are not necessary. If necessary, ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Warehouses, production area, parking lots and waste holding facilities must have adequate containment to prevent



environmental contamination. Provide separate shower and eating facilities.

Personal Protective Equipment:

Eyes: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin: Where contact is likely, wear chemical-resistant gloves (such as nitrile or butyl), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Respiratory: A respirator is not normally required when handling this substance.

9. Physical And Chemical Properties

Appearance: White to light yellow powder

Odor: Odorless

Density: 1.51 g/ml

Melting Point: 209°C

Boiling point: Decomposes before boiling

Partition Coefficient: log P= 2.86 (at pH 7, 20°C)

Vapour pressure: 6.3×10^{-9} mPa (25°C)

Solubility: 0.88 mg/L in water (20°C); In organic solvents: 3446 mg/L in Acetone, 1144 mg/L in Ethyl acetate, 1714 mg/L in Methanol, 162 mg/L in o-Xylene (all at 20°C).

10. Stability And Reactivity

Reactivity: No further relevant information available.

Chemical stability:

Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions: No dangerous reactions known.

Conditions to avoid: No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11. Toxicological Information

Acute oral LD₅₀ (rat): >5000 mg/kg

Acute dermal LD₅₀ (rat): >5000 mg/kg



Acute inhalation LC₅₀ (rat, 4h): >5.1 mg/L
Skin irritation: Non-Irritating (Rabbit)
Eye irritation: Non-irritating (Rabbit)
Skin Sensitization: Non-sensitive (Guinea Pig)

12. Ecological And Ecotoxicological Information

Effect on birds: Acute oral LD₅₀ for Bobwhite quail is >2250 mg/kg.
Effect on fish: Acute LC₅₀ (96 h) for Rainbow trout is >12 mg/l.
Effects on aquatic invertebrates: Acute EC₅₀ (48 h) for Daphnia magna is 0.0116 mg/l.
Effects on algae: Acute 72 hour EC₅₀ for Pseudokirchneriella subcapitata is > 4.0 mg/l.
Effects on bees: contact acute 48 hour LD₅₀ is >4.0 µg/bee, oral acute 48 hour LD₅₀ is >104.1 µg/bee.
Effects on earthworms: Acute 14 day LC₅₀ is >1000 mg/kg

13. Disposal Considerations

Waste treatment methods

Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

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



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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.