



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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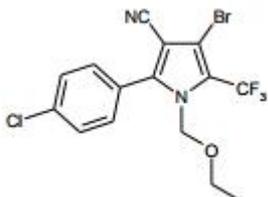
1. Chemical Product Identification

Product Name: Chlorfenapyr 98% TC

Molecular Formula: C₁₅H₁₁BrClF₃N₂O

Molecular Weight: 407.6 g/mol

Structural Formula:



Chemical Name:

4-bromo-2-(4-chlorophenyl)-1-(ethoxymethyl)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile
(IUPAC)

Form: Crystalline powder

Color: Off-white

Odor: Halide odour

CAS No: 122453-73-0

2. Composition / Information On Ingredients

Composition	Chemical name	Content (% w/w)
Active ingredient	Chlorfenapyr	98.0%
Other ingredient	-----	2.0%



3. Hazards Identification

Swallowed: Harmful.

Eye: Will cause irritation.

Skin: Moderately toxic. Will irritate the skin.

Inhaled: Little inhalation hazard if handled in the correct manner.

4. First Aid Measures

If inhaled: Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

If on skin: Rinse skin immediately with plenty of water for 15 – 20 minutes.

If in eyes: Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.

Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

5. Fire-Fighting Measures

Suitable extinguishing media: foam, dry extinguishing media, carbon dioxide, water spray

Hazards during fire-fighting: carbon monoxide, carbon dioxide, hydrogen bromide, hydrochloric acid, Hydrofluoric acid, nitrogen oxides If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

6. Accidental Release Measures

Personal precautions: Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind.

Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions: Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.



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Cleanup: Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling And Storage

Handling: Containers and packages containing this pesticide will be handed carefully, so as to avoid spillages and breakings Store in original container, preferably in a locked area, away from children, feed, food.

Storage: Keep away from heat. Protect against moisture. Protect from direct sunlight. Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

8. Exposure Controls/personal protection

Engineering Controls: Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: general area dilution/exhaust ventilation.

Eye/Face Protection: Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate equipment should be selected for the particular use intended for this material. Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area.

Body Protection: Applicators and other handlers must wear long-sleeved shirts, long pants, chemical resistant, waterproof gloves, and shoes plus socks during mixing, loading, applying and clean-up and repair activities. Where overhead exposure is possible, chemical resistant headgear should be worn.

9. Physical And Chemical Properties

Appearance: Off-white crystalline powder



Odour: Halide odour

Melting point: 100-102°C

Vapour pressure: 5.4×10^{-6} Pa (25°C)

Relative density: 1.53 g/cm³

n-octanol/water partition coefficient: log K_{ow} =4.83

Solubility in water: In deionized water—0.11mg/L(10°C); 0.14mg/L(25°C); 0.20mg/L(30°C)

Solubility in organic solvents (15-25°C, g/100mL): The solubility of Chlorfenapyr TC is 133 in acetone, 53.7 in acetonitrile, 5.13 in methanol, 78.6 in ethyl acetate.

10. Stability And Reactivity

Conditions to avoid: Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat. Avoid contamination. Avoid electro-static discharge. Avoid prolonged storage.

Substances to avoid: Strong oxidizing agents

Hazardous reactions: The product is chemically stable. Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

11. Toxicological Information

Acute oral LD₅₀ for rats: >626 mg/kg

Acute dermal LD₅₀ for rats: > 2000mg/kg

Acute inhalation toxicity: LC₅₀ (4h) for rats: >1.9 mg/l

Skin irritation: Slightly irritating to rabbits.

Eye irritation: Non irritating to rabbits

Skin Sensitization: Non-sensitive (Guinea Pig)

12. Ecological And Ecotoxicological Information

Effects on bees: Unknown mode acute 48 hour LD₅₀ for honeybees is 0.12 a.i.µg/bee.

Effects on fish: Acute 96 hour LC₅₀ for Rainbow trout is >0.007 a.i.mg/l.

Effect on aquatic organisms: Acute 96 hour EC₅₀ for Daphnia magna: 0.0061 a.i.mg/l.

Effects on birds: Acute oral LD₅₀ for Mallard is 10 a.i.mg/kg.

13. Disposal Considerations

Disposal Methods: Check governmental regulations and local authorities for approved



disposal of this material. Dispose in accordance with applicable laws and 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 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.