



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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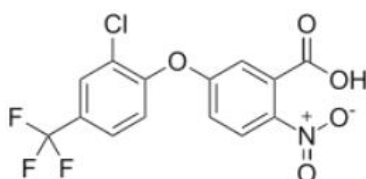
1. Chemical Product Identification

Common Name: Acifluorfen 90% TC

Molecular Formula: C₁₄H₇ClF₃NO₅

Molecular Weight: 361.66

Structural Formula:



Chemical Name: 5-(2-chloro- α,α,α -trifluoro-p-tolyloxy)-2-nitrobenzoic acid

Form: Solid

Color: White or brown

CAS No.: 50594-66-6

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Acifluorfen	50594-66-6	90
Other ingredients	---	10

3. Hazards Identification

Acute Effects: Existing medical conditions aggravated by exposure to butyl cellosolve:
Individuals with existing hemolytic disorders.

Eyes: Risk of serious damage to eyes. Causes irreversible eye damage.



Skin: Severely irritating to the skin.

Ingestion: Harmful if swallowed.

4. First Aid Measures

If In Eyes: 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.

If On Skin Or Clothing: 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.

If Swallowed: 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.

5. Fire-Fighting Measures

Flash Point: 210°F

Autoignition Temperature: Not Determined

Extinguishing Media: Use water fog, CO(2), or dry chemical extinguishing media.

Fire and Explosion Hazards: Toxic materials are generated in a fire (hydrogen chloride, hydrogen fluoride, nitrogen oxide).

Special Firefighting Procedures: Firefighters should be equipped with self-contained breathing apparatus and turnout gear.

6. Accidental Release Measures

Personal Precautions: Avoid contact with the skin and the eyes. Use personal protective equipment.

Environmental Precautions: Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Methods for Clean-up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder,



universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

7. Handling And Storage

Handling: Avoid inhalation of spray and fumes and contact with skin and eyes. Use with adequate ventilation. Wash hands before eating, chewing gum, smoking or using the toilet. Remove clothing immediately if the herbicide gets inside. Then wash skin using nonabrasive soap. Do not apply directly to areas to surfaces where water is present, or to intertidal areas below the mean high water mark.

Storage: Store in its original labelled containers in shaded, well ventilated areas, away from heat, sparks or other sources of ignition. Not to be stored next to food stuffs and water supplies. Keep out of reach of children and animals.

8. Exposure Controls/Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

Recommendations For Manufacturing, Commercial Blending, and packaging workers:

Eye Protection: Chemical goggles when respirator does not provide eye protection.

Respiratory Protection: Supplied air respirators should be worn if large quantities of vapor or mist are generated or prolonged exposure possible.

Protective Clothing: Gloves, apron, long-sleeved shirt, and long pants to prevent skin contact.

Contains butoxyethanol which is skin absorbed. Avoid all skin contact.

Ventilation: Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Other: Eyewash and safety showers should be easily accessible.

9. Physical and Chemical Properties

Appearance: White or brown solid

pH: 4.0-8.0

Moisture: $\leq 0.5\%$

Melting point: 155°C

Partition Coefficient: $\log P = 1.18$ (at pH 7, 20°C)

Vapour pressure: 0.133 mPa (25°C)

Solubility: 250 g/l in water (20°C); In organic solvents: 50 g/l in acetone , 1 g/l in n-hexane



(all at 20°C).

10. Stability and Reactivity

Stability: Stable under recommended storage conditions.

Conditions to Avoid: Freezing temperatures.

Incompatible Materials: oxidizers.

Hazardous Decomposition Products: Oxides of carbon and nitrogen. Hydrogen chloride. Hydrogen fluoride.

Possibility of Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological Information

Acute oral LD50 for rat: 1370 a.i.mg/kg.

Acute dermal LD50 for rabbit: >2000 a.i.mg/kg.

Inhalation LC50 (4 h) for rat: 6.9 a.i. mg/L.

Skin irritation: Moderate skin irritant (rabbits).

Eye irritation: Severe eye irritant (rabbits).

Skin sensitization: Not a skin sensitiser (guinea pigs).

12. Ecological And Ecotoxicological Information

Effect on birds: low toxicity to birds, acute oral LD50 for Mallard ducks is 2821 a.i.mg/kg.

Effect on fish: moderate toxicity to fish, acute 96 hour LC50 for Rainbow trout is 54 a.i.mg/L.

Effect on aquatic invertebrates: moderate toxicity to aquatic invertebrates, acute 48 hour EC50 for Daphnia magna is 28 a.i.mg/L.

Effect on honeybees: low toxicity to honeybees, contact acute 48 hour LD50 is >100 a.i.µg/bee.

Effect on earthworms: low toxicity to earthworms, acute 14 day LC50 for Eisenia foetida as sodium salt is >1800 a.i.mg/kg.

13. Disposal Considerations

Product: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.



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Contaminated packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

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.