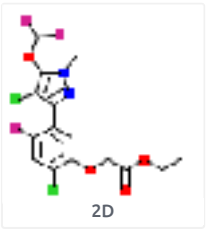
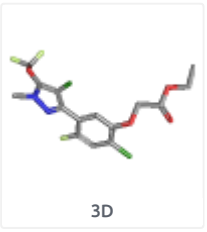
PubChem

COMPOUND SUMMARY

Pyraflufen-ethyl

PubChem CID:	182951
Structure:	 2D  3D Find Similar Structures
Chemical Safety:	 Environmental Hazard Laboratory Chemical Safety Summary (LCSS) Datasheet
Molecular Formula:	$C_{15}H_{13}Cl_2F_3N_2O_4$
Synonyms:	Pyraflufen-ethyl 129630-19-9 UNII-XOC9Q2DLMI Pyraflufen-ethyl [ISO:BSI] XOC9Q2DLMI More...
Molecular Weight:	413.2 g/mol
Dates:	Modify: 2020-02-26 Create: 2005-08-09

Pyraflufen-ethyl is an ethyl ester resulting from the formal condensation of the carboxy group of pyraflufen with ethanol. A proherbicide for pyraflufen, it is used for the control of broad-leaved weeds and grasses in a variety of crops. It has a role as an EC 1.3.3.4 (protoporphyrinogen oxidase) inhibitor, a proherbicide and an agrochemical. It is a member of pyrazoles, a biaryl, an ethyl ester, an aromatic ether, a member of monochlorobenzenes and a member of monofluorobenzenes. It derives from a pyraflufen.

▸ ChEBI

11 Safety and Hazards

11.1 Hazards Identification

11.1.1 GHS Classification

Showing 1 of 2 View More

Pictogram(s)	 Environmental Hazard
Signal	Warning
GHS Hazard Statements	Aggregated GHS information provided by 216 companies from 2 notifications to the ECHA C&L Inventory. Each notification may be associated with multiple companies. H400 (100%): Very toxic to aquatic life [Warning Hazardous to the aquatic environment, acute hazard] H410 (100%): Very toxic to aquatic life with long lasting effects [Warning Hazardous to the aquatic environment, long-term hazard] Information may vary between notifications depending on impurities, additives, and other factors. The percentage value in parenthesis indicates the notified classification ratio from companies that provide hazard codes. Only hazard codes with percentage values above 10% are shown.
Precautionary Statement Codes	P273, P391, and P501 (The corresponding statement to each P-code can be found at the GHS Classification page.)

▶ European Chemicals Agency (ECHA)

11.1.2 Skin, Eye, and Respiratory Irritations

Harmful if absorbed through skin. Causes moderate eye irritation. /ET-751 Technical (a.i. 97.9%)/

Nichino America, Inc; ET-751 Technical Product Label. 3 p. Accepted by EPA on May 17, 2005

▶ HSDB

11.2 Accidental Release Measures

11.2.1 Cleanup Methods

Do not allow the spray solution to dry in the application equipment. ... Immediately following application, clean all equipment thoroughly with detergent or a spray tank cleaner and water... Drain sprayer tank, hoses, and spray boom and thoroughly rinse with clean water the inside of the spray tank, sprayer hoses, boom, and nozzles to remove any sediment or residues. Fill the tank half full with clean water, add the appropriate detergent... Fill tank to capacity and operate the sprayer with agitation for 15 minutes... Drain the sprayer tank, lines, and booms. Rinse the tank with clean water and flush through the hoses, boom, and nozzles. Remove and clean spray nozzles, tips, and screens. Dispose of all cleaning solutions, rinsate, and washwaters in accordance with Federal, state, and local regulations. /ET Herbicide/Defoliant (a.i. 2.5%); ET 2%SC Herbicide/Defoliant/

Nichino America, Inc; ET Herbicide/Defoliant Product Label. 12 p. Accepted with Comments in EPA letter dated November 20, 2006; Nichino America, Inc; ET 2% SC Herbicide/Defoliant Product Label. 15 p. Accepted by EPA under FIFRA on August 11, 2006.

▶ HSDB

11.2.2 Disposal Methods

12 Toxicity

12.1 Toxicological Information

12.1.1 Evidence for Carcinogenicity

Cancer Classification: Likely to be Carcinogenic to Humans

USEPA Office of Pesticide Programs, Health Effects Division, Science Information Management Branch: "Chemicals Evaluated for Carcinogenic Potential" (April 2006)

HSDB

12.1.2 Human Toxicity Excerpts

/SIGNS AND SYMPTOMS/ Corrosive. Causes irreversible eye damage. Harmful if absorbed through skin. /ET Herbicide/Defoliant (a.i. 2.5%)/

Nichino America, Inc; ET Herbicide/Defoliant Product Label. 12 p. Accepted with Comments in EPA letter dated November 20, 2006.

HSDB

/SIGNS AND SYMPTOMS/ Harmful if absorbed through skin. Causes moderate eye irritation. /ET-751 Technical (a.i. 97.9%)/

Nichino America, Inc; ET-751 Technical Product Label. 3 p. Accepted by EPA on May 17, 2005

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/GENOTOXICITY/ Duplicate cultures of human (male) whole blood lymphocytes (stimulated for 48 hours with PHA) were exposed to ET-751 Technical (97.6% pyraflufen-ethyl), in the presence and absence of rat liver S9, at 0 (DMSO), 650, 1300, and 2600 ug/mL in two assays. Non-activated cultures were exposed for 19 or 43 hours; cultures with activation for 3 hours and harvested 16 or 40 hours later. One thousand lymphocytes per culture were scored for metaphases (mitotic index) and one hundred metaphases were examined for aberrations. Test article precipitation was reported in all cultures treated at 2600 ug/mL. No increase in aberrant metaphases. Positive controls were functional.

*California Environmental Protection Agency Department of Pesticide Regulation. Pyraflufen-Ethyl Summary of Toxicological Data (2003). Available from, as of February 08, 2007: **http://www.cdpr.ca.gov/docs/toxsums/pdfs/5865.pdf***

HSDB

12.1.3 Non-Human Toxicity Excerpts

/LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ ET-751 (purity = 96.8%) was admixed to the diet and fed to 10 CD rats per sex per dose at dose levels of 0 (untreated diet), 200, 1000, 5000, or 15000 ppm (0, 17.8, 85.6, 455.5, and 1489.4 mg/kg/day, respectively for males and 0, 19.4, 95.4, 499.0, and 1502.9 mg/kg/day, respectively for females) [with 5 additional rats per sex per dose level at the 0, 5000, and 15000 ppm dose levels to test reversibility (8-week reversibility period used)] for 13 weeks. 1 male at 15000 ppm was sacrificed in extremis on Day 9 and 2 males at 15000 ppm died on Day 12. Treatment related clinical signs exhibited by some animals at 15000 ppm included thin build, underactive behavior, pallor, partially closed eyelids, hunched posture, irregular respiration, fast respiration, abdominal distension, and piloerection with all signs clearing in all surviving animals after Week 7. No treatment related clinical signs were observed at dose levels less than 15000 ppm. A treatment related decrease mean body weight gain was observed in males at 15000 ppm during Weeks 0-13; no treatment related effect was observed during Weeks 13-21. Treatment related decreases in mean hemoglobin and hematocrit levels (reversibility demonstrated in both after 7 weeks) and an increase in the mean white blood cell level (reversibility demonstrated after 5 weeks) were observed in both sexes at 15000 ppm. Treatment related increases in mean alkaline phosphatase, alanine aminotransferase (reversibility demonstrated after 3 weeks), aspartate aminotransferase (reversibility demonstrated after 3 weeks), and cholesterol levels were observed in males at 15000 ppm. Urinalysis revealed a treatment related increase in mean urine volume and a treatment-related decrease in mean specific gravity in both sexes at 15000 ppm (reversibility demonstrated in both after 3 weeks). Treatment related increases in mean relative spleen (in males and females (not statistically significant) at