

Acifluorfen, sodium; CASRN 62476-59-9

Human health assessment information on a chemical substance is included in the IRIS database only after a comprehensive review of toxicity data, as outlined in the [IRIS assessment development process](#). Sections I (Health Hazard Assessments for Noncarcinogenic Effects) and II (Carcinogenicity Assessment for Lifetime Exposure) present the conclusions that were reached during the assessment development process. Supporting information and explanations of the methods used to derive the values given in IRIS are provided in the [guidance documents located on the IRIS website](#).

STATUS OF DATA FOR Acifluorfen, sodium

File First On-Line 03/31/1987

Category (section)	Assessment Available?	Last Revised
Oral RfD (I.A.)	yes	03/31/1987
Inhalation RfC (I.B.)	not evaluated	
Carcinogenicity Assessment (II.)	not evaluated	

I. Chronic Health Hazard Assessments for Noncarcinogenic Effects

I.A. Reference Dose for Chronic Oral Exposure (RfD)

Substance Name — Acifluorfen, sodium

CASRN — 62476-59-9

Primary Synonym — Tackle

Last Revised — 03/31/1987

The oral Reference Dose (RfD) is based on the assumption that thresholds exist for certain toxic effects such as cellular necrosis. It is expressed in units of mg/kg-day. In general, the RfD is an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. Please refer to the Background Document for an elaboration of these concepts. RfDs can also be derived for the noncarcinogenic health effects of

substances that are also carcinogens. Therefore, it is essential to refer to other sources of information concerning the carcinogenicity of this substance. If the U.S. EPA has evaluated this substance for potential human carcinogenicity, a summary of that evaluation will be contained in Section II of this file.

I.A.1. Oral RfD Summary

Critical Effect	Experimental Doses*	UF	MF	RfD
Mortality and kidney lesions	NOEL: 25 ppm(diet) (1.25 mg/kg/day)	100	1	1.3E-2 mg/kg/day
2-Generation Reproduction Rat Study	LEL: 500 ppm (diet) (25 mg/kg/day)			
Rhone-Poulenc, Inc., 1986				

*Conversion Factors -- 1 ppm = 0.05 mg/kg/day (assumed rat food consumption)

I.A.2. Principal and Supporting Studies (Oral RfD)

Rhone-Poulenc, Inc. 1986. MRID No. 00147978, 00155548. Available from EPA. Write to FOI, EPA, Washington, DC 20460.

The test material, technical grade tackle, was prepared weekly on a weight- per-weight basis to yield tackle concentrations of 0, 25, 500 and 2500 ppm. Diets were administered ad libitum to groups of 35 P1 rats/sex beginning at 47 days of age and continuing until sacrifice, and to groups of 40 F1 rats from weaning until sacrifice. The LEL and NOEL for parental toxicity of tackle was assessed at 500 ppm and 25 ppm, respectively, based on compound-related mortalities and increased incidence of kidney lesions at the 500 and 2500 ppm doses, and reduced body weights at the 2500-ppm dose. The LEL and NOEL for offspring toxicity were assessed at 500 ppm and 25 ppm, respectively, based on decreased viability and increased incidence of kidney lesions at the 500 and 2500 ppm doses, and reduced body weight at the 2500-ppm dose.

I.A.3. Uncertainty and Modifying Factors (Oral RfD)

UF — An uncertainty factor of 100 was used to account for the inter- and intraspecies differences.

MF — None

I.A.4. Additional Studies/Comments (Oral RfD)

None

Data Considered for Establishing the RfD:

- 1) 2-Generation Reproduction - rat: Principal study - see previous description; core grade minimum
- 2) 2-Year Feeding - dog: NOEL=300 ppm (7.5 mg/kg/day); LEL=4500 ppm (112.5 mg/kg/day) (increased leukocyte and platelet counts in males; decreased mean calcium, cholesterol and creatinine values in females); core grade supplementary (Rhone-Poulenc, Inc., 1983a)
- 3) 2-Year Feeding (oncogenic) - rat: NOEL=500 ppm (25 mg/kg/day); LEL=2500 ppm (elevated BUN and creatinine values in males and females; nephritis, pyelonephritis, and glomerulonephritis in males); core grade supplementary (Rhone-Poulenc, Inc., 1983b)
- 4) Teratology - rabbit: Maternal NOEL=36 mg/kg/day (HDT); Fetotoxic NOEL=36 mg/kg/day (HDT); Teratogenic NOEL=36 mg/kg/day (HDT); core grade minimum (Rhone-Poulenc, Inc., 1980)
- 5) Teratology - rat: Maternal NOEL=90 mg/kg/day; Maternal LEL=180 mg/kg/day (HDT) (lower body weight); Fetotoxic NOEL=20 mg/kg/day (LDT); Fetotoxic LEL=90 mg/kg/day (reduced fetal weight); Teratogenic NOEL=180 mg/kg/day (HDT); core grade guideline (Rhone-Poulenc, Inc., 1981)

Data Gap(s): Chronic Dog Feeding Study

I.A.5. Confidence in the Oral RfD

Study — Medium

Database — Medium

RfD — Medium

The principal study is of fair quality and is given a medium confidence rating. Several supporting studies exist, but the database on chronic toxicity is incomplete; thus, the database is given a medium confidence rating. Medium confidence in the RfD follows.

I.A.6. EPA Documentation and Review of the Oral RfD

Pesticide Registration Files

Agency Work Group Review — 09/29/1986, 12/16/1986

Verification Date — 12/16/1986

Screening-Level Literature Review Findings — A screening-level review conducted by an EPA contractor of the more recent toxicology literature pertinent to the RfD for Acifluorfen, sodium, conducted in November 2001 did not identify any critical new studies. IRIS users who know of important new studies may provide that information to the IRIS Hotline at hotline.iris@epa.gov or (202)566-1676.

I.A.7. EPA Contacts (Oral RfD)

Please contact the IRIS Hotline for all questions concerning this assessment or IRIS, in general, at (202)566-1676 (phone), (202)566-1749 (FAX) or hotline.iris@epa.gov (internet address).

I.B. Reference Concentration for Chronic Inhalation Exposure (RfC)

Substance Name — Acifluorfen, sodium

CASRN — 62476-59-9

Primary Synonym — Tackle

Not available at this time.

II. Carcinogenicity Assessment for Lifetime Exposure

Substance Name — Acifluorfen, sodium

CASRN — 62476-59-9

Primary Synonym — Tackle

Not available at this time.

III. [reserved]

IV. [reserved]

V. [reserved]

VI. Bibliography

Substance Name — Acifluorfen, sodium

CASRN — 62476-59-9

Primary Synonym — Tackle

Last Revised — 10/01/1990

VI.A. Oral RfD References

Rhone-Poulenc, Inc. 1980. MRID No. 00122744. Available from EPA. Write to FOI, EPA, Washington, D.C. 20460.

Rhone-Poulenc, Inc. 1981. MRID No. 00122743. Available from EPA. Write to FOI, EPA, Washington, D.C. 20460.

Rhone-Poulenc, Inc. 1983a. MRID No. 00122735, 00131162. Available from EPA. Write to FOI, EPA, Washington, D.C. 20460.

Rhone-Poulenc, Inc. 1983b. MRID No. 00128353. Available from EPA. Write to FOI, EPA, Washington, D.C. 20460.

Rhone-Poulenc, Inc. 1986. MRID No. 00147978, 00155548. Available from EPA. Write to FOI, EPA, Washington, D.C. 20460.

VI.B. Inhalation RfD References

None

VI.C. Carcinogenicity Assessment References

None

VII. Revision History

Substance Name — Acifluorfen, sodium

CASRN — 62476-59-9

Primary Synonym — Tackle

Date	Section	Description
12/03/2002	I.A.6.	Screening-Level Literature Review Findings message has been added.

VIII. Synonyms

Substance Name — Acifluorfen, sodium

CASRN — 62476-59-9

Primary Synonym — Tackle

Last Revised — 03/31/1987

- 62476-59-9
- ACIFLUORFEN
- ACIFLUORFEN SODIUM

- BENZOIC ACID, 5-(2-CHLORO-4-(TRIFLUOROMETHYL)PHENOXY)-2-NITRO-, SODIUM SALT
- BLAZER
- BLAZER 2S
- 5-(2-CHLORO-4-(TRIFLUOROMETHYL)PHENOXY)-2-NITROBENZOIC ACID SODIUM SALT
- MC 10978
- RH 6201
- SCIFLUORFEN
- Sodium acifluorfen
- SODIUM 5-(2-CHLORO-4-(TRIFLUOROMETHYL)PHENOXY)-2-NITROBENZOATE
- SODIUM SALT of ACIFLUORFEN
- Tackle
- TACKLE 2AS