SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-K-00227
Product Name	Acifluorfen sodium
CAS No.	62476-59-9
Category	Pesticide Standards
Synonyms	sodium 5-(2-chloro-4-(trifluoromethyl)phenoxy)-2-nitrobenzoate
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Skin irritation (Category 2)
Serious eye damage/eye irritation (Category 2)
Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H302	Harmful if swallowed.
H315	Causes skin irritation.

H318	Causes serious eye damage.
H400	Not available
H410	Not available
H301	Not available
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H335	Not available
H361	Not available
H370	Not available
H373	Not available

Precautionary Statement(s)

Code	Statement
P264	Wash hands thoroughly after handling.
P264+P265	Not available
P270	Not available
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P317	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P354+P338	Not available
P317	Not available
P321	Specific treatment (see … on this label).
P330	Not available
P332+P317	If skin irritation occurs: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Not available
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio
P203	Not available
P260	Not available

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P301+P316	Not available
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if presen
P308+P316	Not available
P318	Not available
P319	Get medical help if you feel unwell.
P337+P317	If eye irritation persists: Get medical help.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Acifluorfen sodium
CAS Number : 62476-59-9
Molecular Formula : C■■H■ClF■NNaO■
Molecular Weight : 383.64
Parent Chemical : -
Synonyms : sodium 5-(2-chloro-4-(trifluoromethyl)phenoxy)-2-nitrobenzoate
Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures
General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms persist or if you feel unwell.
Inhalation: Move person to fresh air. Keep at rest. Get medical attention if symptoms occur.
Skin contact: Wash with plenty of soap and water. Get medical attention if irritation develops or persists.
Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention if irritation persists.
Ingestion: Rinse mouth. Do NOT induce vomiting unless directed by medical personnel. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed
Not available.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically. No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
Suitable extinguishing media: Use extinguishing measures appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture
May form hazardous decomposition products under fire conditions. Specific hazardous combustion products: Not available.

5.3 Advice for firefighters
Wear self-contained breathing apparatus (SCBA) and full protective gear. Prevent fire-fighting water from entering drains or watercourses.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid breathing dust. Avoid contact with skin and eyes. Use appropriate personal protective equipment.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Avoid release to the environment. Prevent entry into drains, surface waters, or soil.

6.3 Methods and material for containment and cleaning up
Contain spill. Collect spilled material using methods that minimize dust generation. Place in suitable, closed container for disposal. Clean contaminated area.

6.4 Reference to other sections
See Section 8 for personal protective equipment and Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice. Avoid formation of dust and aerosols. Avoid contact with skin, eyes, and clothing. Do not breathe dust. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities
Store in tightly closed container in a cool, dry, well-ventilated place. Protect from moisture. Keep away from incompatible materials. Specific incompatibilities: Not available.

7.3 Specific end use(s)
Pesticide standard / laboratory use. Not for food, drug, or household use.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Occupational exposure limits: Not available.
Biological limit values: Not available.

8.2 Exposure controls
Engineering controls: Use local exhaust ventilation or general ventilation to minimize airborne concentrations.
Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Protective gloves. Protective clothing as appropriate.
- Respiratory protection: If ventilation is inadequate or dust is generated, use appropriate respiratory protection.
- Hygiene measures: Wash hands after handling. Remove contaminated clothing and wash before reuse.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available

Property	Value
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Avoid excessive heat. Avoid dust generation. Other conditions: Not available.

10.5 Incompatible materials
Not available.

10.6 Hazardous decomposition products
Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: LC50 (rat) > 6,900 mg/m3/4h /LABORATORY ANIMALS: Acute Exposure/ Severe eye irritant; moderate skin irritant (rabbit). /Acifluorfen/[Tomlin, C.D.S. (ed.). The Pesticide Manual - World Compendium. 10th ed. Surrey, UK: The British Crop Protection Council, 1994., p. 13]
- Skin corrosion/irritation: /SIGNS AND SYMPTOMS/ DANGER: corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through the skin...Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. /Storm Herbicide and Ultra Blazer/ /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ New Zealand white rabbits, 20 animals per dose per sex, were exposed to Tackle 2S by dermal application (occlusive) at 92, 277 and 923 mg/kg bw (at day 4 highest dose was reduced to 4.62 mg/kg bw) 5 days a week for 21 days (Vehicle: NaOH solution (not specified) pH 7.5-7.6, total volume applied: 1mL, 3mL, 10mL (5mL after day 4)). CLINICAL OBSERVATIONS AND MORTALITY - Mortality and time to death (day): at 923 mg/kg bw 19/20 died ore were sacrificed before day 8, one male survived until sacrifice; at 92 mg/kg bw 1 male (8); at 277 mg/kg bw 1 male (13); controls one male and one female (21) - Clinical signs: at highest dose ataxia, decreased

activity, nasal discharge, respiratory distress and salivation was seen in both sexes, males showed incidently diarrhoea and tremors; at 277 mg/kg bw incidental nasal discharge, hair loss, soft stool, tremors, diarrhea and bloating was seen; at the lowest dose incidental signs were confined to diarrhea and bloating; in all dose groups a white crystaline substance at the application site was observed. Severe dermal irritation with eschar formation was seen in males and females from day 2-3 to day 21 of exposure. A relationship with amount of applied material was evident. Body weight gain: decreased body weight in highest dose group (significant in females) ... CLINICAL CHEMISTRY: No treatment related effects. MACRO- AND MICROSCOPIC FINDINGS: Organ weights: at 277 mg/kg bw significant increase in mean relative adrenal weight in females (toxicological significance questionable) - Macroscopy: marked dermatitis with epithelial necrosis and eschar formation at the exposure site for all exposure levels. - Histopathology: microscopic changes indicative of macroscopic findings, all other findings were incidental and not related with treatment. Effects on intestinal epithelium were attributed to coccidal infections ANALYSES: Actual dose was 87-106% of nominal value ... Conclusion: Tackle 2S was acutely toxic when administered at the high dose. Body weight gain and food consumption were decreased in high dose animals. Nineteen of 20 animals receiving the high dose did not survive past day eight of the study. In addition Tackle 2S was a severe cumulative dermal irritant at all dose levels. No toxicologically significant changes in body weight, food consumption, hematological and clinical chemistry parameters, or urinalysis data were observed among control, low dose, and mid dose groups. NOAEL systemic 277 mg/kg based on survival and body weight LOAEL local effects 92 mg/kg. /Tackle 2S/[EPA/Office of Pollution Prevention and Toxics; High Production Volume Information System (HPVIS) on Benzoic acid, 5-

- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: Cancer Classification: Likely to be Carcinogenic to Humans at High Doses; Not Likely to be Carcinogenic to Humans at Low Doses
- Reproductive toxicity: No data available.
- STOT-single exposure: No data available.
- STOT-repeated exposure: /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ The test material, technical grade Tackle, was prepared weekly on a weight- per-weight basis to yield Tackle concentrations of 0, 25, 500 and 2,500 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 2,500 ppm doses, and reduced body weights at the 2,500-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 2,500 ppm doses, and reduced body weight at the 2,500-ppm dose. /Tackle/ /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ Fiscber 344 rats, 60 per dose per sex, were administered 0, 20, 80, 320, 1,250, 2,500 and 5,000 ppm of the test substance (TACKLE 2AS formulation, purity 20-21.6%) in food for 90 days. Acutal intakes of 1.5, 6.1, 23.7, 92.5, 191.8 and 401.7 mg/kg bw/day in males and 1.8, 7.4, 29.7, 116.0, 237.1 and 441.8 mg/kg bw/day in females were determined. CLINICAL OBSERVATIONS: Mortality and time of death: No rats died. Clinical signs: dorsal hair loss in all groups. Body weight gain: significantly decreased in both males and females at 2,500 and 5,000 ppm - ... CLINICAL CHEMISTRY - hematology: Males above 1,250 ppm showed lower red blood cell counts, hemoglobin and hematocrit values and associated increase in number of reticulocytes, females at the two highest doses showed these signs to a lesser extent; reduced platelet counts over time (not treatment related) - biochemistry: Males above 320 ppm showed significant depression of blood glucose at study termination, while females showed slight increase; inconsistent changes in serum triglycerides (not treatment related); at 5,000 ppm both males and females showed elevated serum cholesterol; at 5,000 ppm males showed significant decrease in serum protein at 30 days and at

termination, for females significance only at 30 days; elevated albumin/globulin ratio at three highest doses (males) and highest dose (females); depressed serum calcium levels at 5,000 ppm and increased phosphorus in males, in females to a lesser extent; elevated alkaline phosphatase and serum G/P transaminase at 5,000 ppm in both sexes indications of reduced renal function: significant increase in blood urea nitrogen in both sexes at 30 days for males at 2,500 and 5,000 persistent at 90 days; increased BUN/creatinine ration in males at 30 days but not at 90 days; significantly different values of uric acid for both sexes (without consistent trend). Urinalysis: at 30 days: increased urobilinogen in males at 5,000 ppm (other measures of bilirubin showed little deviation); slightly diminished protein excretion in both sexes at 5,000 ppm; increased frequency of trace amounts of nitrite in males above 320 ppm at 90 days: increased urobilinogen in both sexes at 2,500 and 5,000 ppm; decreased protein excretion with increasing dose in females for males only at 5000 ppm; increased frequency of trace amounts of nitrite in females at 2,500 and 5,000 ppm MACRO- AND MICROSCOPIC FINDINGS - Organ weights: significantly increased liver and kidney weight, both absolute and relative, in males above 320 ppm at 30 and 90 days (except at day 30 for 2500 ppm), females to a lesser extent at 2,500 and 5,000 ppm on day 30 and at 5,000 ppm on day 90); sporadic deviation in heart and brain weight (no toxicological pattern); increased relative testis weight (not considered significant) were a function of reduced overall body weight and are not considered significant. - Macroscopy: Interim kill - 30 Days: control animals: diffuse brown discoloration of the kidney (1 male); enlargement of left mandibular lymph node (1 male); 5,000 ppm: liver (diffuse dark staining) and kidney (cortex darkening or diffuse discoloration) discoloration in both males and females 90 days: no abnormalities in controls, at 5,000 ppm dark brown discoloration of the liver and kidney (dark brown cortexes) in both males and females (females less affected) - Histopathology: Interim Kill - Day 30: Presence of mononuclear cells in the lungs in both control and treatment group (not test substane related) 5000 ppm: increased liver cell hypertrophy in both sexes; increased mitotic figures in males and females (but to a lesser extent); liver tissue damage in both sexes Terminal Kill - Day 90: Both control and treatment group showed presence of mononuclear cells and vascular mineralization in the lung and cysts in various organs (all considered not treatment related); Controls: cell death in liver in part of the males. 5000 ppm: cell death and hypertrophy in liver cells of all males, in females only hypertrophy in part of the animals and no cell death; increased proliferation of oval cells and bile duct in majority of males ... NOAEL 320 ppm (23.7 mg/kg bw) based on the presence of liver damage with concomittant changes in blood chemistry.[EPA/Office of Pollution Prevention and Toxics; High Production Volume Information System (HPVIS) on Benzoic acid, 5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-nitro-, sodium salt (62476-59-9). Available from, as of January 31, 2007: http://iaspub.epa.gov/oppthpv/]
- Aspiration hazard: No data available.

Likely routes of exposure
- /SIGNS AND SYMPTOMS/ DANGER: corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through the skin...Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. /Storm Herbicide and Ultra Blazer/

Symptoms related to the physical, chemical and toxicological characteristics
- /SIGNS AND SYMPTOMS/ DANGER: corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through the skin...Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. /Storm Herbicide and Ultra Blazer/

SECTION 12: Ecological information

SECTION 12: Ecological information

12.1 Toxicity
No data available.

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
Not available.

12.6 Endocrine disrupting properties
No data available.

12.7 Other adverse effects
No data available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/container in accordance with local/regional/national/international regulations. Do not discharge to drains or the environment. Incineration or disposal via a licensed waste contractor may be appropriate. Contaminated packaging: Dispose of as unused product in accordance with applicable regulations.

SECTION 14: Transport information

SECTION 14: Transport information

14.1 UN number
Not available.

14.2 UN proper shipping name
Not available.

14.3 Transport hazard class(es)
Not available.

14.4 Packing group
Not available.

14.5 Environmental hazards
Not available.

14.6 Special precautions for user
Not available.

14.7 Maritime transport in bulk according to IMO instruments
Not available.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Not available.

15.2 Chemical safety assessment
No data available.

SECTION 16: Other information

SECTION 16: Other information

Product name: Acifluorfen sodium
CAS No.: 62476-59-9
Synonyms: sodium 5-(2-chloro-4-(trifluoromethyl)phenoxy)-2-nitrobenzoate
Catalog No.: CS-K-00227
Supplier: Clearsynth Labs Ltd., Mumbai, India
Emergency phone: +91-22-245045900

Disclaimer: The information provided is believed to be accurate based on available product identification details; however, no warranty is expressed or implied. Users must determine suitability for their particular application and comply with all applicable laws and regulations.
Revision date: Not available.

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