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

Catalogue Number	CS-T-23692
Product Name	Florasulam
CAS No.	145701-23-1
Category	Pesticide Standards
Synonyms	Not available
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:

Not available

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H400	Not available
H410	Not available

Precautionary Statement(s)

Code	Statement
P273	Not available
P391	Not available
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Florasulam
CAS Number : 145701-23-1
Molecular Formula : C12H8F3N5O3S
Molecular Weight : 359.28
Parent Chemical : -
Synonyms : Not available
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 are severe.
Inhalation: Move person to fresh air. Keep at rest. If breathing is difficult, seek medical attention.
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. Seek medical attention if irritation persists.
Ingestion: Rinse mouth. Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person. Seek 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: Water spray, alcohol-resistant foam, dry chemical, carbon dioxide.
Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture

May decompose under fire conditions to release hazardous fumes/gases. Specific decomposition products: Not available.

5.3 Advice for firefighters
Wear self-contained breathing apparatus (SCBA) and full protective gear. Use water spray to cool unopened containers. Prevent fire-fighting water from entering drains or waterways.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

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

6.2 Environmental precautions
Avoid release to the environment. Prevent entry into drains, surface water, and soil.

6.3 Methods and material for containment and cleaning up
Contain spill. Sweep up or collect using methods that minimize dust generation and place in a suitable, labeled container for disposal. Clean spill area with water and detergent as appropriate. Dispose of waste in accordance with local regulations.

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 breathing dust. Avoid contact with skin, eyes, and clothing. Wash hands thoroughly after handling. Do not eat, drink, or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities
Store in a tightly closed container in a cool, dry, well-ventilated place. Protect from moisture. Keep away from incompatible materials. Incompatible materials: 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 (material not specified). Wear protective clothing to prevent skin contact.
- Respiratory protection: If dust or aerosols are generated and ventilation is inadequate, use an appropriate NIOSH/EN-approved particulate respirator.
- Hygiene measures: Wash hands and exposed skin after handling. Remove contaminated clothing and wash before reuse.
Environmental exposure controls: Avoid release to the environment; use appropriate containment.

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
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available

Property	Value
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
Heat, flames, ignition sources, and moisture (if applicable). Specific 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: /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ In a repeated-dose dermal toxicity study, XDE-570 (Florasulam; 99.3% ai) in aqueous 0.5% Methocel was applied to the shaved skin of 5 Fischer 344 rats/sex/dose at dose levels of 0, 100, 500, or 1000 mg/kg/day, 6 hours/day for 7 days/week during a 28-day period. No compound related effects in mortality, clinical signs, body weight, body weight gain, food consumption, hematology, clinical chemistry, urinalysis, organ weights, and gross or microscopic pathology parameters were observed in either sex. At 1000 mg/kg/day, very slight (grade 1) edema and erythema at the treatment site were noted in 4/5 males beginning on Day 23. Dermal irritation was resolved by Day 28 . The systemic LOAEL is not determined and the systemic NOAEL is 1000 mg/kg/day. The dermal LOAEL is 1000 mg/kg/day, based on edema and erythema observed at the treatment site in males (4/5). The dermal NOAEL is 500 mg/kg/day. /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ In a 90-day oral toxicity study, XDE-570 (Florasulam; 99.3% ai) was administered to 4 Beagle dogs/sex/dose ad libitum in the diet at dose levels of 0, 5, 50, or 100 mg/kg/day (time-weighted average test substance intake was 0/0, 6/6, 56/55, and 104/94 mg/kg/day (M/F)) for 13 weeks. There were no compound-related effects on mortality, clinical signs, body weight, body weight gain, food consumption, ophthalmoscopy, hematology, urinalysis, or gross pathology observed at any dose. The target organ appeared to be the liver. At 50 mg/kg, alkaline phosphatase activity was increased ($p<0.05$) by 59-112% in the males and 91-127% in the females on Days 45 and 91, and there was a slight increase in the incidence of hepatic vacuolation (3/4

treated (very slight to slight severity) vs. 1/4 control (moderate severity) females). At 100 mg/kg, the following liver effects were noted: (i) alkaline phosphatase activity was increased ($p<0.05$) by 213-451% in both sexes on Days 45 and 91; (ii) increased incidence of very slight to slight hepatic vacuolation (4/4 treated vs. 3/4 control males and 3/4 treated vs. 1/4 control females); and (iii) increased ($p<0.05$) absolute (incr. 22-29%) and relative (to body; incr. 26-27%) liver weight in both sexes. The LOAEL is 50 mg/kg/day, based on increased alkaline phosphatase (59-127%) activity and increased incidence/severity of hepatic vacuolation in both sexes. The NOAEL is 5 mg/kg/day.
- Skin corrosion/irritation: /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ In a repeated-dose dermal toxicity study, XDE-570 (Florasulam; 99.3% ai) in aqueous 0.5% Methocel was applied to the shaved skin of 5 Fischer 344 rats/sex/dose at dose levels of 0, 100, 500, or 1000 mg/kg/day, 6 hours/day for 7 days/week during a 28-day period. No compound related effects in mortality, clinical signs, body weight, body weight gain, food consumption, hematology, clinical chemistry, urinalysis, organ weights, and gross or microscopic pathology parameters were observed in either sex. At 1000 mg/kg/day, very slight (grade 1) edema and erythema at the treatment site were noted in 4/5 males beginning on Day 23. Dermal irritation was resolved by Day 28 . The systemic LOAEL is not determined and the systemic NOAEL is 1000 mg/kg/day. The dermal LOAEL is 1000 mg/kg/day, based on edema and erythema observed at the treatment site in males (4/5). The dermal NOAEL is 500 mg/kg/day.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: No data available.
- Reproductive toxicity: No data available.
- STOT-single exposure: /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ In a 90-day oral toxicity study, XDE-570 (Florasulam; 99.3% ai) was administered to 4 Beagle dogs/sex/dose ad libitum in the diet at dose levels of 0, 5, 50, or 100 mg/kg/day (time-weighted average test substance intake was 0/0, 6/6, 56/55, and 104/94 mg/kg/day (M/F)) for 13 weeks. There were no compound-related effects on mortality, clinical signs, body weight, body weight gain, food consumption, ophthalmoscopy, hematology, urinalysis, or gross pathology observed at any dose. The target organ appeared to be the liver. At 50 mg/kg, alkaline phosphatase activity was increased ($p<0.05$) by 59-112% in the males and 91-127% in the females on Days 45 and 91, and there was a slight increase in the incidence of hepatic vacuolation (3/4 treated (very slight to slight severity) vs. 1/4 control (moderate severity) females). At 100 mg/kg, the following liver effects were noted: (i) alkaline phosphatase activity was increased ($p<0.05$) by 213-451% in both sexes on Days 45 and 91; (ii) increased incidence of very slight to slight hepatic vacuolation (4/4 treated vs. 3/4 control males and 3/4 treated vs. 1/4 control females); and (iii) increased ($p<0.05$) absolute (incr. 22-29%) and relative (to body; incr. 26-27%) liver weight in both sexes. The LOAEL is 50 mg/kg/day, based on increased alkaline phosphatase (59-127%) activity and increased incidence/severity of hepatic vacuolation in both sexes. The NOAEL is 5 mg/kg/day.
- STOT-repeated exposure: /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ In a repeated-dose dermal toxicity study, XDE-570 (Florasulam; 99.3% ai) in aqueous 0.5% Methocel was applied to the shaved skin of 5 Fischer 344 rats/sex/dose at dose levels of 0, 100, 500, or 1000 mg/kg/day, 6 hours/day for 7 days/week during a 28-day period. No compound related effects in mortality, clinical signs, body weight, body weight gain, food consumption, hematology, clinical chemistry, urinalysis, organ weights, and gross or microscopic pathology parameters were observed in either sex. At 1000 mg/kg/day, very slight (grade 1) edema and erythema at the treatment site were noted in 4/5 males beginning on Day 23. Dermal irritation was resolved by Day 28 . The systemic LOAEL is not determined and the systemic NOAEL is 1000 mg/kg/day. The dermal LOAEL is 1000 mg/kg/day, based on edema and erythema observed at the treatment site in males (4/5). The dermal NOAEL is 500 mg/kg/day. /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ In a 90-day oral toxicity study, XDE-570

(Florasulam; 99.3% ai) was administered to 4 Beagle dogs/sex/dose ad libitum in the diet at dose levels of 0, 5, 50, or 100 mg/kg/day (time-weighted average test substance intake was 0/0, 6/6, 56/55, and 104/94 mg/kg/day (M/F)) for 13 weeks. There were no compound-related effects on mortality, clinical signs, body weight, body weight gain, food consumption, ophthalmoscopy, hematology, urinalysis, or gross pathology observed at any dose. The target organ appeared to be the liver. At 50 mg/kg, alkaline phosphatase activity was increased ($p<0.05$) by 59-112% in the males and 91-127% in the females on Days 45 and 91, and there was a slight increase in the incidence of hepatic vacuolation (3/4 treated (very slight to slight severity) vs. 1/4 control (moderate severity) females). At 100 mg/kg, the following liver effects were noted: (i) alkaline phosphatase activity was increased ($p<0.05$) by 213-451% in both sexes on Days 45 and 91; (ii) increased incidence of very slight to slight hepatic vacuolation (4/4 treated vs. 3/4 control males and 3/4 treated vs. 1/4 control females); and (iii) increased ($p<0.05$) absolute (incr. 22-29%) and relative (to body; incr. 26-27%) liver weight in both sexes. The LOAEL is 50 mg/kg/day, based on increased alkaline phosphatase (59-127%) activity and increased incidence/severity of hepatic vacuolation in both sexes. The NOAEL is 5 mg/kg/day.
- Aspiration hazard: No data available.

Likely routes of exposure
- LC50 Rat inhalation >/ = 5.0 mg/L/4 hr

Symptoms related to the physical, chemical and toxicological characteristics
- /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ In a repeated-dose dermal toxicity study, XDE-570 (Florasulam; 99.3% ai) in aqueous 0.5% Methocel was applied to the shaved skin of 5 Fischer 344 rats/sex/dose at dose levels of 0, 100, 500, or 1000 mg/kg/day, 6 hours/day for 7 days/week during a 28-day period. No compound related effects in mortality, clinical signs, body weight, body weight gain, food consumption, hematology, clinical chemistry, urinalysis, organ weights, and gross or microscopic pathology parameters were observed in either sex. At 1000 mg/kg/day, very slight (grade 1) edema and erythema at the treatment site were noted in 4/5 males beginning on Day 23. Dermal irritation was resolved by Day 28 . The systemic LOAEL is not determined and the systemic NOAEL is 1000 mg/kg/day. The dermal LOAEL is 1000 mg/kg/day, based on edema and erythema observed at the treatment site in males (4/5). The dermal NOAEL is 500 mg/kg/day.

SECTION 12: Ecological information

SECTION 12: Ecological information

12.1 Toxicity
Not available.

12.2 Persistence and degradability
Not available.

12.3 Bioaccumulative potential
Not available.

12.4 Mobility in soil
Not available.

12.5 Results of PBT and vPvB assessment
Not available.

12.6 Endocrine disrupting properties
Not available.

12.7 Other adverse effects
Not 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.
Product: Dispose of as hazardous waste or as required by regulations; classification depends on local rules and contamination.
Contaminated packaging: Empty containers may retain residues; dispose of as per 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
Not available.

SECTION 16: Other information

SECTION 16: Other information

Product name: Florasulam
Catalog No.: CS-T-23692
CAS No.: 145701-23-1
Molecular weight: 359.28
Category: Pesticide Standards
Supplier: Clearsynth Labs Ltd., Mumbai, India
Emergency phone: +91-22-245045900

Revision date: Not available.
Disclaimer: The information provided is based on available product information and is intended for guidance in safe handling, use, processing, storage, transportation, disposal, and release. It does not constitute a warranty of any kind. Users are responsible for compliance with applicable laws and regulations.

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