SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1272/2008 (CLP/GHS)

Revision Date: 11 September 2022

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name Flufenacet Technical
CAS No. 142459-58-3
EC No.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Herbicide

1.3. Details of the supplier of the safety data sheet

Supplier Address Cropnosys India Pvt Ltd
Plot No. 5303, GIDC Estate, Phase IV, District: Valsad
Vapi- 396195, Gujarat, INDIA

Tel No. Tel: +91 22 652 26797

For further information, please contact

Email address info@cropnosysindia.com
Website www.cropnosysindia.com

1.4. Emergency telephone number

Emergency Telephone +91 22 652 26797

Section 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

Acute toxicity, oral	Category 4 - (H302)
Skin sensitization	Category 2 - (H317)
Specific target organ toxicity (rep. exp.)	Category 2 - (H373)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms

Signal Word	Warning
Hazard Statements	H302 - Harmful if swallowed H317 - May cause an allergic skin reaction H373 - May cause damage to organs through prolonged or repeated exposure H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects
Precautionary Statements	P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/ eye protection/ face protection P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3: COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Name	CAS No	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concentration
Flufenacet Technical*	142459-58-3		Acute Tox. 4 (H302) Skin Sensitization. 2 (H317) Spec. Target Organ Tox. 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	98.0%

*Synonym: N-(4-Fluorophenyl)-N-isopropyl-2-[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yloxy]acetamide
*Molecular Formula: $C_{14}H_{13}F_4N_3O_2S$

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact Wash off with soap and plenty of water. Consult a physician.

Eye contact Flush eyes with water as a precaution.

Ingestion If swallowed, never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms Described in labelling (see section 2.2.) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment There is no specific antidote. Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Hydrogen fluoride

5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4. Further information

No data available

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other Sections

Refer to disposal considerations listed in section 13.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace control parameters.

8.2. Exposure controls

Engineering measures	Handle in accordance to general industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment	Wash hands and face after working with the product.
Respiratory protection	For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Body protection	Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Eye/face protection	Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Environment exposure controls	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Form: powder Colour: beige
Odour	odourless
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	119 °C
Boiling point/range	No data available
Flash point	No data available
Evaportation rate	No data available
Flammability (solid, gas)	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	insoluble
Partition Coefficient n-octanol /water	log Pow: 3.20
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2. Other information

Bulk Density	625g/l

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No information available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

No information available

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition

Hazardous decomposition products formed under fire conditions - Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Hydrogen fluoride
Other decomposition products - No data available
In the event of fire - refer section 5

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity	LD50 Oral - Rat -> 589 mg/kg (Flufenacet) LC50 Inhalation - Rat - 4 h -> 3,700 ppm (Flufenacet) LC50 Dermal - Rat -> 2,000 mg/kg (Flufenacet)
Skin corrosion/irritation	Skin - Rabbit (Flufenacet) Result: No skin irritation
Serious eye damage/eye irritation	Eyes - Rabbit (Flufenacet) Result: No eye irritation
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity	Damage to fetus cannot be excluded (Fluazinam) Suspected human reproductive toxicant (Fluazinam)
Specific target organ toxicity	
- **Single exposure**	No data available
- **Repeated exposure**	No data available
Aspiration hazard	No data available
Additional information	RTECS: AC2845000

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 5.8 mg/l - 96.0 h (Flufenacet)
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata (green algae) - 0.085 mg/l - 72.0 h (Flufenacet)

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available (Flufenacet)

12.5. PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. Other adverse effects

Very toxic to aquatic life with long lasting effects.
Avoid release to the environment.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product	Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustive solvent and burn in chemical scrubber.
Contaminated packaging	Dispose of as unused product.

Section 14: TRANSPORT CONSIDERATIONS

ADR/RID/ADN

14.1	UN number	3077
14.2	Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
14.3	Transport hazard class(es)	9
14.4	Packing group	III
14.5	Environmental Hazards	Environmentally hazardous

IMDG

14.1	UN number	3077
14.2	Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
14.3	Transport hazard class(es)	9
14.4	Packing group	III
14.5	Environmental Hazards	Marine Pollutant

IATA

14.1	UN number	3077
14.2	Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
14.3	Transport hazard class(es)	9
14.4	Packing group	III
14.5	Environmental Hazards	Environmentally hazardous

14.6 Special precautions for user

EHS-Mark requires (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging and combination packaging containing inner packaging with Dangerous Goods > 5L for liquids or > 5kg for solids.

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Labeling according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Hazard pictograms

Signal word Warning

Hazard Statements
H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/ eye protection/ face protection
P501 - Dispose of contents/ container to an approved waste disposal plant

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

Section 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

Further information
Full text of H-Statements referred to under sections 2 and 3.

H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
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Revision Note *** -Change from previous version.

The material safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008 [CLP/GUH]

Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet