

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 13 Jun 2023

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

Flufenacet

### 1.1. Catalog No.:

674735

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS 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)  
Specific target organ toxicity - repeated exposure (Category 2)  
Skin sensitization (Category 1)  
Acute aquatic toxicity (Category 1)  
Chronic aquatic toxicity (Category 1)  
Classification according to EU Directives 67/548/EEC or 1999/45/EC  
Harmful if swallowed. Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 2.2. Label elements

#### 2.2.1. Pictogram



### 2.2.2.

Signal word Warning  
Hazard statement(s)  
H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects  
Precautionary statement(s)  
P273 Avoid release to the environment.  
P280 Wear protective gloves.  
P501 Dispose of contents/ container to an approved waste disposal plant.  
Supplemental Hazard  
Statements  
None R-phrases(s)  
R22 Harmful if swallowed.  
R43 May cause sensitization by skin contact.  
R48/22 Harmful: danger of serious damage to health by prolonged exposure if  
swallowed.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in  
the aquatic environment.  
S-phrases(s)  
S13 Keep away from food, drink and animal feedingstuffs.  
S24 Avoid contact with skin.  
S37 Wear suitable gloves.  
S60 This material and its container must be disposed of as hazardous waste.  
S61 Avoid release to the environment. Refer to special instructions/ Safety  
data sheets.  
2.3 Other hazards - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances  
Synonyms : N-(4-Fluorophenyl)-N-isopropyl-2-[5-(trifluoromethyl)-1,3,4-thiadiazol-2-  
yloxy]acetamide  
Formula : C<sub>14</sub>H<sub>13</sub>F<sub>4</sub>N<sub>3</sub>O<sub>2</sub>S  
Molecular Weight : 363,33 g/mol  
Component Concentration  
Flufenacet  
CAS-No.  
Index-No.  
142459-58-3  
613-164-00-9  
-

### 3.1.1. Formula

C<sub>14</sub>H<sub>13</sub>F<sub>4</sub>N<sub>3</sub>O<sub>2</sub>S

### 3.1.2. Molecular Weight (g/mol)

363.33

### 3.1.3. CAS-No.

142459-58-3

## 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.

#### If inhaled

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

#### In case of skin contact

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

#### In case of eye contact

Flush eyes with water as a precaution.

#### 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

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

no data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable 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), Sulphur oxides, Hydrogen fluoride

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

no data available

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, 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 materials 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

For disposal see section 13.

## 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.

### 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)

no data available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

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 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.

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.

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).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance Form: powder

Colour: beige

b) Odour no data available

c) Odour Threshold no data available

d) pH no data available

e) Melting point/freezing point

no data available

f) Initial boiling point and boiling range

no data available

g) Flash point no data available

h) Evaporation rate no data available

i) Flammability (solid, gas) no data available

j) Upper/lower flammability or

explosive limits

no data available

k) Vapour pressure no data available

l) Vapour density no data available

m) Relative density no data available  
n) Water solubility insoluble  
o) Partition coefficient: noctanol/  
water  
log Pow: 3,2  
p) Auto-ignition  
temperature  
no data available  
q) Decomposition  
temperature  
no data available  
r) Viscosity no data available  
s) Explosive properties no data available  
t) Oxidizing properties no data available  
9.2 Other safety information  
Bulk density 625 g/l

## 10. STABILITY AND REACTIVITY

10.1 Reactivity  
no data available  
10.2 Chemical stability  
no data available  
10.3 Possibility of hazardous reactions  
no data available  
10.4 Conditions to avoid  
no data available  
10.5 Incompatible materials  
Strong oxidizing agents  
10.6 Hazardous decomposition products  
Other decomposition products - no data available

## 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects  
Acute toxicity  
LD50 Oral - rat - 589 mg/kg  
LC50 Inhalation - rat - 4 h - > 3700 ppm  
LD50 Dermal - rat - > 2.000 mg/kg  
Skin corrosion/irritation  
Skin - rabbit - No skin irritation  
Serious eye damage/eye irritation  
Eyes - rabbit - No eye irritation  
Respiratory or skin sensitization  
May cause allergic skin reaction.  
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  
no data available  
Specific target organ toxicity - single exposure  
no data available  
Specific target organ toxicity - repeated exposure  
no data available  
Aspiration hazard  
no data available  
Potential health effects  
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion Harmful if swallowed.  
Skin May be harmful if absorbed through skin. May cause skin irritation.  
Eyes May cause eye irritation.  
Additional Information  
RTECS: AC2845000

## 12. ECOLOGICAL INFORMATION

12.1 Toxicity  
Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - 5,8 mg/l - 96,0 h  
Toxicity to algae EC50 - *Pseudokirchneriella subcapitata* (green algae) - 0,085 mg/l - 72 h  
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  
no data available  
12.6 Other adverse effects  
Very toxic to aquatic life.

## 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 combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.  
Contaminated packaging  
Dispose of as unused product

## 14. TRANSPORT INFORMATION

14.1 UN number  
ADR/RID: 3077 IMDG: 3077 IATA: 3077  
14.2 UN proper shipping name  
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Flufenacet)  
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Flufenacet)  
IATA: Environmentally hazardous substance, solid, n.o.s. (Flufenacet)  
14.3 Transport hazard class(es)  
ADR/RID: 9 IMDG: 9 IATA: 9  
14.4 Packaging group  
ADR/RID: III IMDG: III IATA: III  
14.5 Environmental hazards  
ADR/RID: yes IMDG Marine Pollutant: yes IATA: yes  
14.6 Special precautions for user  
Further information  
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

15.2 Chemical Safety Assessment

no data available

## 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!