

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

### 1.1. Product identifier

Product form : Mixture  
Product name : Firecloud  
Product code : MSI 000 C0218  
Type of formulation : Suspension concentrate (SC)  
Active Ingredient : Flufenacet  
MAPP : 18175

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

#### 2.1. Relevant identified uses

Main use category : Plant protection product for professional use. Agriculture.  
Use of the substance/mixture : Herbicide.

#### 1.2.2. Uses advised against

No additional information available.

### 1.3. Details of the supplier of the safety data sheet

CERTIS UK

Suite 5, 3 Riverside  
Granta Park  
Great Abington  
Cambridgeshire CB21 6AD  
United Kingdom  
Tel: +44 (0)845 373 0305  
Fax: +44 (0)1223 891210  
Email: [certis@certiseurope.co.uk](mailto:certis@certiseurope.co.uk)  
Website: [www.certiseurope.co.uk](http://www.certiseurope.co.uk)

### 1.4. Emergency telephone number

Emergency number : Certis Carechem24 multilingual 24 hours emergency number: +44 (0) 870 190 6777.  
For advice on medical emergencies, fires, spillages or chemical hazards only –phone: 0870 190 6777.  
For further advice for medical professionals - The National Poisons Information Service:  
Tel: 0870 600 6266 (UK only) or Dublin Tel: 0035 3 137 99 64/379966.  
For further advice for veterinary surgeons: 020 7635 9195.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Acute Tox. 4 (Oral) H302  
STOT RE 2 H373  
Aquatic Acute 1 H400  
Aquatic Chronic 1 H410

Full text of H-phrases: see section 16.

## 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Warning

Hazard statements (CLP)

 : H302 - Harmful if swallowed.  
 H373 - May cause damage to organs through prolonged or repeated exposure.  
 H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

 : P260 - Do not breathe gas/mist/vapours/spray.  
 P264 - Wash hands, forearms and face thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.  
 P391 - Collect spillage.  
 P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

EUH-statements

 : EUH208 - Contains Flufenacet . May produce an allergic reaction.  
 EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable.

### 3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Flufenacet	(CAS No) 142459-58-3	< 50	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : In the event of any complaints or symptoms, avoid further exposure.

First-aid measures after inhalation : IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist call a doctor.

First-aid measures after skin contact	: IF ON SKIN: Wash with plenty of soap and water. Remove contaminated clothing and shoes. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for at least 15 minutes, also under eyelides. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist.
First-aid measures after ingestion	: IF SWALLOWED: Immediately call a POISON CENTER or doctor. Never give anything by mouth to an unconscious person.

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

Symptoms/injuries : No information available.

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

The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray  
Dry chemical powder  
Alcohol resistant foam  
Carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media : Water spray jet.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustion or thermal decomposition may generate toxic vapours: chlorine compounds, nitrogen oxides, carbon monoxide, hydrocarbons.

#### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.  
Fight fire from safe distance and protected location.  
Do not breathe fumes  
Cool closed containers exposed to fire with water spray  
If possible, take the containers out of dangerous zone.  
Contain fire-fighting water with dikes or absorbents to prevent migration and entry into sewers, streams or groundwater.

Protection during firefighting : Wear suitable protective clothing, gloves, eye/face protection and respiratory protection  
Wear a self-contained breathing apparatus.

### SECTION 6: Accidental release measures

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

Protective equipment : Wear suitable protective clothing, gloves and eye/ face protection.

Emergency procedures : Evacuate area.  
Ensure adequate ventilation.  
Avoid direct contact with the substance.  
Contain any spills with dikes or absorbents to prevent migration and entry into sewers, streams or groundwater.

## 6.2. Environmental precautions

Prevent entry to sewers and public waters.

Notify the authorities if product enters sewers or public waters.

## 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.

Once absorbed collect spilled material with shovels, buckets and place in closed containers and label properly.

Remove as chemical waste, according to national or local legislation.

In the event of major spillage: contact an expert.

## 6.4. Reference to other sections

See sections 7-8-13.

# SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

Precautions for safe handling : Read label before use.

Avoid contact with eyes, skin, nose and mouth.

Wear suitable protective clothing, gloves and eye/face protection.

Opened containers must be carefully closed and kept upright to avoid leakage.

Hygiene measures : Always wash your hands immediately after handling this product, and once again before leaving the workplace.

Contaminated work clothing should not be allowed out of the workplace.

Do not eat, drink or smoke when using this product.

Wash contaminated clothing before reuse.

## 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide adequate ventilation.

Storage conditions : Prevent unauthorised access.

Keep locked up and out of the reach of children.

Keep in original containers, tightly closed.

Keep away from food, drink and animal feedingstuffs.

Protect against frost.

Keep away from heat and direct sunlight.

Shelf life : The product is expected to be stable for two years.

## 7.3. Specific end use(s)

Herbicide for agricultural use. Refer to the label.

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

No additional information available.

## 8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Protective clothing. Protective goggles. Gloves. Dust/aerosol mask.



Hand protection : Wear impervious gloves resistant to chemical. Nitrile rubber.

Eye protection : Safety goggles or a face shield.

Skin and body protection : Protective clothing with long sleeves waterproof and resistant to chemicals. Rubber boots.

Respiratory protection : Wear appropriate respirator for dust / organic vapors.

Hygiene measures : Remove and wash contaminated clothing before re-use.  
 Do not eat, drink or smoke while handling the product.  
 Clean gloves with soap and water before removing.  
 Wash hands and face with soap and water before eating, drinking smoking and immediately after handling product.  
 Clean equipment, premises and work clothes regularly.  
 Work clothing should remain on the work area and stored separately from street clothes.

Environmental exposure controls : Discharge into the environment must be avoided.  
 Do not contaminate surface and groundwater.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH of a 1% aqueous dilution	: 5,76
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: 400°C: No flame detected
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1,1891 g/ml
Solubility	: No data available

Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

## 9.2. Other information

Surface tension: Mean corrected surface tension at 20°C: 65,22 mN/m ± 1,84

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is stable at normal handling and storage conditions.

### 10.2. Chemical stability

Physically and chemically stable after storage for 8 weeks at 40°C.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

Is not explosive and does not exhibit oxidant properties.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Combustion or thermal decomposition may generate toxic vapours: chlorine compounds, nitrogen oxides, carbon monoxide, hydrocarbons.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

Firecloud	
LD50 oral rat	> 300 - < 2000 mg/kg bw

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Flufenacet (142459-58-3)

LC50 Fishes ( <i>Leopomis macrochirus</i> )	2,13 mg/l (96h)
EC50 Daphnia ( <i>Daphnia magna</i> )	30,9 mg/l (48h)
EC50 ( <i>Lemna gibba</i> )	0,00243 mg/l (14d)
ErC50 Algae ( <i>Pseudokrichneriella subcapitata</i> )	0,00973 mg/l (72h)

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

The risk of bioaccumulation in aquatic food chains was assessed as low, based on a BCF of 71,4 (whole fish) and since during the depuration phase residues in fish declined with a half-life for clearance of 0,3 days.

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

No additional information available

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No. : 3082  
 UN-No.(IATA) : 3082

### 14.2. UN proper shipping name

Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Flufenacet)  
 Transport document description : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Flufenacet), 9, III, (E)

### 14.3. Transport hazard class(es)

Class (UN) : 9  
 Class (IATA) : 9 - Miscellaneous dangerous goods.  
 Hazard labels (UN) : 9



### 14.4. Packing group

Packing group (UN) : III

**14.5. Environmental hazards**

 Dangerous for the environment :  
 Marine pollutant

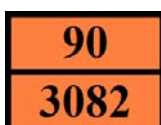

Other information : No supplementary information available.

**14.6. Special precautions for user**
**14.6.1. Overland transport**

Hazard identification number (Kemler No.) : 90

Classification code (UN) : M6

Orange plates :



Special provision (ADR) : 274, 335, 601

Transport category (ADR) : 3

Tunnel restriction code : E

Limited quantities (ADR) : 5L

Excepted quantities (ADR) : E1

EAC code : •3Z

**14.6.2. Transport by sea**

EmS-No. (1) : F-A

EmS-No. (2) : S-F

**14.6.3. Air transport**

No additional information available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15: Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
**15.1.1. EU-Regulations**

No REACH Annex XVII restrictions

Contains no REACH candidate substance

**15.1.2. National regulations**

No additional information available

**15.2. Chemical safety assessment**

No additional information available

**SECTION 16: Other information**

Indication of changes:

Change date	Previous Version	Section	Changed Item	Change	Comments
19/05/2015	1.0	14	ADR: 3077	Modified	Rob Schoonbeek proposal.
22/05/2015	2.0	2.2	P phrases	Modified	According to Appendix 3 to CRD.



08/06/2015	2.1	2.2	1,2-benzisothiazolin-3-one (002634-33-5)	Added	Biocide co-formulate.
25/06/2015	2.4	2.2	P270, P313, P302+P352	Removed	Consultant remark
			P314	Added	Consultant remark
29/06/2015	2.5	2.2	P333+ P314	Modified	Text modified by RA
04/03/2015	2.7	7,9,11,12	Updated		According to Core Assessment, December 2015
17/08/2018	2.8	1	MAPP: 16745	Modified	

## Full text of H phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Skin Sens. 1	Sensitisation — Skin, category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
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