

Trade name: SUNFIRE**Product no.:** MAI 117 C00310 IE**Current version :** 1.0.2, issued: 10.05.2022**Replaced version:** 1.0.0, issued: 17.02.2022**Region:** IE**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name

SUNFIRE

UFI:

328T-T07A-H002-G231

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

Plant protection product for professional use. Agriculture.

Herbicide

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet**Address**

Certis Europe B.V. (EU)

Stadsplateau 16

3521 AZ Utrecht - Netherlands

Telephone no. +31(0)30 200 1200

Fax no. +31 (0)30 310 0241

e-mail www.certiseurope.com**Advice on Safety Data Sheet**www.certiseurope.com**Identification of the supplier****Address**

Certis Europe B.V. - United Kingdom

Suite 5, 3 Riverside

Granta Park - Great Abington

Cambridgeshire CB21 6AD

United Kingdom

Telephone no. +44 (0) 1223 894 261

Fax no. +44 (0)1223 891210

e-mail info@certiseurope.co.uk - www.certiseurope.co.uk**1.4 Emergency telephone number**

+353 1 809 2166 (National Poisons Information Centre)

Carechem 24 EU: +44 1235 239670

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**

Acute Tox. 4; H302

Aquatic Acute 1; H400

Aquatic Chronic 1; H410

STOT RE 2; H373

Classification information

Classification and labelling are based on toxicological studies performed on the product (mixture).

Classification and labelling with respect to water pollution risks are based on ecotoxicological studies performed on the product (mixture).

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)**

Hazard pictograms



GHS07



GHS08



GHS09

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Warning

Hazard statement(s)

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.

Hazard statements (EU)

EUH208

Contains Flufenacet (ISO), 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH401

To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statement(s)

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P264

Wash hands thoroughly after handling.

P270

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

P301+P312

IF SWALLOWED: Call a POISON CENTER/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 triple rinsed empty clean containers which can be disposed of as non-hazardous waste.

UFI:

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2.3 Other hazards

PBT assessment

The components of this product are not considered to be a PBT.

vPvB assessment

The components of this product are not considered to be a vPvB.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable. The product is not a substance.

3.2 Mixtures**Chemical characterization**

Flufenacet 500 g/l (SC)

Hazardous ingredients

No	Substance name		Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration	%
1	Flufenacet (ISO)			
	142459-58-3 - 613-164-00-9 -	Acute Tox. 4*; H302 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Skin Sens. 1; H317 STOT RE 2*; H373**	>= 25,00 - < 50,00	wt%
2	1,2-benzisothiazol-3(2H)-one			
	2634-33-5 220-120-9 613-088-00-6 01-2120761540-60	Acute Tox. 4*; H302 Aquatic Acute 1; H400 Eye Dam. 1; H318 Skin Irrit. 2; H315 Skin Sens. 1; H317	< 0,10	wt%

Full Text for all H-phrases and EUH-phrases: pls. see section 16

(*, **, ***, ****) Detailed explanation pls. refer to CLP regulation No. 1272/2008, annex VI, 1.2

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
1	-	-	M = 100	-
2	-	Skin Sens. 1; H317: C >= 0,05%	-	-

No	Route, target organ, concrete effect
1	H373 dermal; liver; -

Acute toxicity estimate (ATE) values

No	oral	dermal	inhalative
1	383 mg/kg bodyweight		

SECTION 4: First aid measures**4.1 Description of first aid measures**

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If medical advice is needed, have product container or label at hand.

After inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

After skin contact

Take off contaminated clothing. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

After ingestion

Rinse mouth. Call a POISON CENTER or doctor/physician.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Alcohol-resistant foam; Carbon dioxide; Extinguishing powder; Water spray jet

Unsuitable extinguishing media

High power water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon dioxide (CO₂); Carbon monoxide (CO)

5.3 Advice for firefighters

Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations. Wear protective clothing.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). When collected, handle material as described under the section heading "Disposal considerations".

6.4 Reference to other sections

Information regarding waste disposal, see section 13. Information regarding personal protective measures, see section 8. Information regarding safe handling, see section 7.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

No special measures necessary if stored and handled as prescribed. Provide good ventilation at the work area (local exhaust ventilation, if necessary).

General protective and hygiene measures

Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Do not eat, drink or smoke during work time. Remove soiled or soaked clothing immediately. Do not inhale vapours.

Advice on protection against fire and explosion

No special measures necessary.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions**

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Keep container tightly closed and dry in a cool, well-ventilated place. Keep from freezing. Protect from heat and direct sunlight.

Requirements for storage rooms and vessels

Containers which are opened must be carefully closed and kept upright to prevent leakage. Keep only in the original container.

Incompatible products

Do not store together with foodstuffs.

7.3 Specific end use(s)**Industry solution**

Always read the label and product information before use.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

No parameters available for monitoring.

8.2 Exposure controls**Appropriate engineering controls**

No data available.

Personal protective equipment**Respiratory protection**

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection

Safety glasses (EN 166)

Hand protection

In case of intensive contact, wear protective gloves (EN 374). Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material

nitrile rubber

Other

Chemical-resistant work clothes. Rubber boots. (EN 13832-3/EN ISO 20345)

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

State of aggregation	
liquid	
Form/Colour	
liquid	
whitish	
Odour	
vanilla	
pH value	
Value	5,7
Concentration	1 %
Source	Manufacturer
Boiling point / boiling range	
No data available	
Melting point/freezing point	
No data available	
Decomposition temperature	
No data available	
Flash point	
Value	> 100 °C
Ignition temperature	
No data available	
Auto-ignition temperature	
Value	> 400 °C
Comments	Product is not selfigniting.

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Oxidising properties			
not oxidizing			
Explosive properties			
not explosive			
Flammability			
Not applicable			
Lower explosion limit			
No data available			
Upper explosion limit			
No data available			
Vapour pressure			
Value	9	* 10 ⁻⁵ Pa	
Reference temperature	20	°C	
Reference substance	N-Isomer		
Source	Manufacturer		
Relative vapour density			
No data available			
Relative density			
No data available			
Density			
Value	1,1891	g/ml	
Reference temperature	20	°C	
Solubility			
No data available			
Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	Flufenacet (ISO)	142459-58-3	-
	log Pow	3,2	
	Reference temperature	20	°C
	Source	Manufacturer	
Kinematic viscosity			
Not applicable			
Particle characteristics			
No data available			

9.2 Other information

Other information
No data available.

SECTION 10: Stability and reactivity**10.1 Reactivity**

The product is stable under normal storage and handling conditions.

10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions

Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 Conditions to avoid

Temperatures > 40°C

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute oral toxicity	
No	Product Name

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1	SUNFIRE			
LD50		300	- 2000	mg/kg
Species		rat		
Method		OECD 423		
Source		Manufacturer		

Acute dermal toxicity				
No	Product Name			
1	SUNFIRE			
Evaluation/classification		Based on available data, the classification criteria are not met.		

Acute inhalational toxicity				
No	Product Name			
1	SUNFIRE			
State of aggregation		Dust/mist		
Evaluation/classification		Based on available data, the classification criteria are not met.		

Skin corrosion/irritation				
No	Product Name			
1	SUNFIRE			
Evaluation/classification		Based on available data, the classification criteria are not met.		

Serious eye damage/irritation				
No	Product Name			
1	SUNFIRE			
Evaluation/classification		Based on available data, the classification criteria are not met.		

Respiratory or skin sensitisation				
No	Product Name			
1	SUNFIRE			
Route of exposure		Skin		
Method		OECD 429		
Source		Manufacturer		
Evaluation/classification		Based on available data, the classification criteria are not met.		

Germ cell mutagenicity				
No	Substance name	CAS no.	EC no.	
1	Flufenacet (ISO)	142459-58-3	-	
Source		Manufacturer		
Evaluation/classification		Based on available data, the classification criteria are not met.		

Reproduction toxicity				
No	Substance name	CAS no.	EC no.	
1	Flufenacet (ISO)	142459-58-3	-	
Source		Manufacturer		
Evaluation/classification		Based on available data, the classification criteria are not met.		

Carcinogenicity				
No	Substance name	CAS no.	EC no.	
1	Flufenacet (ISO)	142459-58-3	-	
Source		Manufacturer		
Evaluation/classification		Based on available data, the classification criteria are not met.		

STOT - single exposure				
No data available				

STOT - repeated exposure				
No	Product Name			
1	SUNFIRE			
Source		Manufacturer		
Effects		May cause damage to organs through prolonged or repeated exposure		

Aspiration hazard				
No data available				

11.2 Information on other hazards**Endocrine disrupting properties**

No data available.

Other information

No data available.

SECTION 12: Ecological information**12.1 Toxicity**

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Toxicity to fish (acute)	
No data available	

Toxicity to fish (chronic)	
No	Product Name
1	SUNFIRE
NOEC	0,2 mg/l
Duration of exposure	97 day(s)
Species	Oncorhynchus mykiss
Source	Manufacturer

Toxicity to Daphnia (acute)	
No data available	

Toxicity to Daphnia (chronic)	
No	Product Name
1	SUNFIRE
NOEC	3,26 mg/l
Duration of exposure	21 day(s)
Species	Daphnia magna
Source	Manufacturer

Toxicity to algae (acute)	
No	Product Name
1	SUNFIRE
ErC50	0,0045 mg/l
Duration of exposure	120 h
Species	Selenastrum capricornutum
Source	Manufacturer
EbC50	0,00204 mg/l
Duration of exposure	72 h
Species	Selenastrum capricornutum
Source	Manufacturer

Toxicity to algae (chronic)	
No data available	

Bacteria toxicity	
No data available	

12.2 Persistence and degradability

Biodegradability			
No	Substance name	CAS no.	EC no.
1	Flufenacet (ISO)	142459-58-3	-
Source	Manufacturer		
Evaluation	not readily biodegradable		

12.3 Bioaccumulative potential

Bioconcentration factor (BCF)			
No	Substance name	CAS no.	EC no.
1	Flufenacet (ISO)	142459-58-3	-
BCF	71		
Source	Manufacturer		

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	Flufenacet (ISO)	142459-58-3	-
log Pow	3,2		
Reference temperature	20 °C		
Source	Manufacturer		

12.4 Mobility in soil

Mobility in soil			
No	Substance name	CAS no.	EC no.
1	Flufenacet (ISO)	142459-58-3	-
log Koc	2,305		
Source	Manufacturer		

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	The components of this product are not considered to be a PBT.
vPvB assessment	The components of this product are not considered to be a vPvB.

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No data available.

12.7 Other adverse effects**Other adverse effects**

No other ecological effects are to be mentioned specifically. See the product label for additional instructions on environmental precautions when applying the product.

An environmental hazard cannot be ruled out in the event of unprofessional handling or disposal.

12.8 Other information**Other information**

Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information**14.1 Transport ADR/RID/ADN**

Class	9
Classification code	M6
Packing group	III
Hazard identification no.	90
UN number	UN3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name	Flufenacet (ISO)
Tunnel restriction code	-
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.2 Transport IMDG

Class	9
Packing group	III
UN number	UN3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name	Flufenacet (ISO)
EmS	F-A, S-F
Label	9
Marine pollutant mark	Symbol "fish and tree"

14.3 Transport ICAO-TI / IATA

Class	9
Packing group	III
UN number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Technical name	Flufenacet (ISO)
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

SECTION 15: Regulatory information

Trade name: SUNFIRE**Product no.:** MAI 117 C00310 IE**Current version :** 1.0.2, issued: 10.05.2022**Replaced version:** 1.0.0, issued: 17.02.2022**Region:** IE**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations**

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)				
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.				
REACH candidate list of substances of very high concern (SVHC) for authorisation				
According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.				
Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES				
The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.				No 3
The product contains following substance(s) that are considered being subject to REACH regulation (EC) 1907/2006 annex XVII.				
No	Substance name	CAS no.	EC no.	No
1	1,2-benzisothiazol-3(2H)-one	2634-33-5	220-120-9	75
2	Flufenacet (ISO)	142459-58-3	-	75
3	sodium hydroxide	1310-73-2	215-185-5	75
Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances				
This product is subject to Part I of Annex I, risk category:				E1
Other regulations				
Adhere to the national sanitary and occupational safety regulations when using this product.				

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this mixture.

SECTION 16: Other information**Sources of key data used to compile the data sheet:**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.

Creation of the safety data sheet

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

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