

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

1.1. Product identifier

Trade name	: IKANOS
Product form	: Mixture
Type (Nufarm)	: Country Specific
Country (Nufarm)	: Georgia
CA Code (Nufarm)	: 3021
Product code	: CA3021
Oracle Recipe Code (Nufarm)	: OR3021
Item codes	: 110005114

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

1.2.1. Relevant identified uses

Main use category	: Professional use
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

Manufacturer

Nufarm S.A.S
Immeuble WEST PLAZA
11 rue du débarcadère
92700 COLOMBES - FRANCE
T +33 1 40 85 50 50 - F +33 1 47 92 25 45
FDS@nufarm.com

1.4. Emergency telephone number

Emergency number : Organisme français INRS +33 1 45 42 59 59; Nufarm S.A.S +33 1 40 85 51 15

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazardous to the aquatic environment — Acute Hazard, Category 1 H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410
Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

Very toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS09

Signal word (CLP) : Warning
Contains : Nicosulfuron
Hazard statements (CLP) : H410 - Very toxic to aquatic life with long lasting effects.

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Precautionary statements (CLP)	: P273 - Avoid release to the environment. P391 - Collect spillage. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements	: EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

2.3. Other hazards

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

Component

Nicosulfuron (111991-09-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Nicosulfuron	(CAS-No.) 111991-09-4 (EC-No.) 601-148-4	4.31	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Move victim to fresh air.
First-aid measures after skin contact	: Take off immediately all contaminated clothing. Wash off immediately with soap and plenty of water.
First-aid measures after eye contact	: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Consult an eye specialist.
First-aid measures after ingestion	: Rinse mouth out with water. Do NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

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

No additional information available

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

Treat symptomatically.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Dry powder. Carbon dioxide.
Unsuitable extinguishing media : high volume water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Fire will produce dense black smoke. Decomposition products may be a hazard to health.
Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

Firefighting instructions : Contain the extinguishing fluids by bunding. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting : Wear recommended personal protective equipment. Wear a self contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Refer to chapter 8.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.
Other information : Never return spills in original containers for possible later re-use.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not eat, drink or smoke when using this product.
Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children. Store locked up. Store in a well-ventilated place.

7.3. Specific end use(s)

None.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Minimise exposure using measures such as contained and enclosed systems, properly designed and maintained dedicated facilities and suitable general/local exhaust ventilation.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:			
Type	Field of application	Characteristics	Standard
Safety glasses, Safety goggles		With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:
According to the conditions of use, protective gloves, apron, boots, head and face protection must be worn. EN 14605

Hand protection:					
Wear suitable gloves resistant to chemical penetration					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.4		EN ISO 374-1/A1 , EN 16523+A1 (type A)
Reusable gloves	Chloroprene rubber (CR)	6 (> 480 minutes)	0.5		EN ISO 374-1/A1 , EN 16523+A1 (type A)
Reusable gloves	Butyl rubber	6 (> 480 minutes)	0.7		EN ISO 374-1/A1 , EN 16523+A1 (type A)

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Disposable gloves					EN ISO 374-1/A1 , EN ISO 374-2 (A,B, or C type)
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Other skin protection

Materials for protective clothing:

Condition	Material	Standard
According to the conditions of use, protective gloves, apron, boots, head and face protection must be worn		EN 14605

8.2.2.3. Respiratory protection

Respiratory protection:

Users are advised to consider national Occupational Exposure Limits or other equivalent values. Ensure exposure is below occupational exposure limits (where available).

Device	Filter type	Condition	Standard
respirator with combination filter for vapour/particles	ABEK	In case of inadequate ventilation wear respiratory protection.	EN 14387

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

Other information:

Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke during use. Keep away from children. Remove contaminated clothing. Separate working clothes from town clothes. Wash contaminated clothing before reuse. Wash hands immediately after handling the product. The wearing of PPE will have to be adapted to working conditions and any discomfort felt during the operation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Off-white.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive properties	: Not explosive.
Oxidising properties	: Non oxidizing.
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not available
Auto-ignition temperature	: > 400 °C
Decomposition temperature	: Not available
pH	: 4.5 – 4.7
pH solution concentration	: 1 %
Viscosity, kinematic	: Not available
Viscosity, dynamic	: 240 – 600 mPa.s @ 20°C
Viscosity, dynamic	: 220 – 1250 mPa.s @ 40°C

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Solubility	: Water: 3.59 – 39.2 g/l @ 25°C
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 0.974 g/cm ³ @ 20°C
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1) : Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

Nicosulfuron (111991-09-4)

LD50 oral rat	> 5000 g/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 5.45 mg/l/4h

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Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 4.5 – 4.7
Serious eye damage/irritation	: Not classified pH: 4.5 – 4.7
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: Data apply to the technically active substance
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: Data apply to the technically active substance
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: Data apply to the technically active substance

Nicosulfuron (111991-09-4)

NOAEL	379 mg/kg
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STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met

Nicosulfuron (111991-09-4)

Additional information	: (Mild hepatotoxicity at higher doses (2000 to 50,000 ppm))
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Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
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11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Very toxic to aquatic life with long lasting effects.

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LC50 96h fish	4.03 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 48h crustacea	4.03 mg/l Daphnia magna (Water flea)
EC50 72h algae	0.61 mg/l Anabaena flos-aquae (cyanobacterium)
LD50, Birds	> 2250 mg/kg
LC50, Dermal, Apis mellifera (bee)	> 20 µg/bee

Additional ecotoxicological information

Nicosulfuron (111991-09-4)

LC50 96h fish	65.7 mg/l Oncorhynchus mykiss (rainbow trout)
EC50 48h crustacea	90 mg/l

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EC50 72h algae	7.8 mg/l Anabaena Flos-aquae
ErC50 other aquatic plants	0.0017 mg/l
NOEC (chronic)	5.2 mg/l Daphnia
NOEC chronic fish	10 mg/l Oncorhynchus mykiss (rainbow trout)
LD50, Eisenia fetida (Earthworm)	> 1000 mg/kg
LD50, Dermal, Apis mellifera (bee)	76 µg/bee (2 days)
EC50, Lemna gibba (Duckweed); 7d; static	< 0.001 mg/l

12.2. Persistence and degradability

Nicosulfuron (111991-09-4)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	DT50 65d (water); 7-46.3d (soil)

12.3. Bioaccumulative potential

Nicosulfuron (111991-09-4)	
Partition coefficient n-octanol/water (Log Pow)	0.61 @ 20-21°C pH 2.3-2.4
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil

IKANOS	
Surface tension	37.34 mN/m @ 20°C

Nicosulfuron (111991-09-4)	
Mobility in soil	Koc 20.7

12.5. Results of PBT and vPvB assessment

IKANOS	
PBT: not relevant – no registration required	
vPvB: not relevant – no registration required	

Component	
Nicosulfuron (111991-09-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : No other effects known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Special local collectors can exist.

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Product/Packaging disposal recommendations : Avoid release to the environment. Disposal must be done according to official regulations. Do not re-use empty containers. a hazardous or special waste collection point.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nicosulfuron)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nicosulfuron)	Environmentally hazardous substance, liquid, n.o.s. (Nicosulfuron)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nicosulfuron)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nicosulfuron)
Transport document description (ADR)				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nicosulfuron), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nicosulfuron), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Nicosulfuron), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nicosulfuron), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nicosulfuron), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M6
 Special provisions (ADR) : 274, 335, 375, 601
 Limited quantities (ADR) : 5I
 Excepted quantities (ADR) : E1
 Packing instructions (ADR) : P001, IBC03, LP01, R001
 Special packing provisions (ADR) : PP1
 Mixed packing provisions (ADR) : MP19
 Portable tank and bulk container instructions (ADR) : T4
 Portable tank and bulk container special provisions (ADR) : TP1, TP29
 Tank code (ADR) : LGBV
 Vehicle for tank carriage : AT
 Transport category (ADR) : 3
 Special provisions for carriage - Packages (ADR) : V12

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Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates :



EAC code : •3Z

Transport by sea

Special provisions (IMDG) : 274, 335, 969
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP2, TP29
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-F
Stowage category (IMDG) : A

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 964
PCA max net quantity (IATA) : 450L
CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L
Special provisions (IATA) : A97, A158, A197
ERG code (IATA) : 9L

Inland waterway transport

Classification code (ADN) : M6
Special provisions (ADN) : 274, 335, 375, 601
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : M6
Special provisions (RID) : 274, 335, 375, 601
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Special packing provisions (RID) : PP1
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1, TP29
Tank codes for RID tanks (RID) : LGBV
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW31
Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

No ICPE	Installations classées Désignation de la rubrique	Code Régime	Rayon
4510.text	Dangereux pour l'environnement aquatique de catégorie aiguë 1 ou chronique 1.		

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

NUFARM SDS TEMPLATE

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.