

Product no.  
 Product name **NICOSULFURON 4%**  
 Date: February 2009  
 Last version October 2010

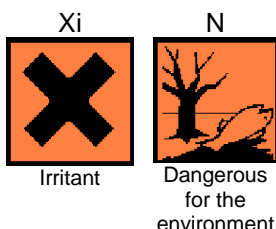
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## SAFETY DATA SHEET

# NICOSULFURON 4% SC

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



Product name **NICOSULFURON 4% SC**  
 Intended use Herbicide  
 Supplier **CHEMINOVA AGRO, S.A.**  
 Paseo de la Castellana, 257 – 5º  
 28046 Madrid  
 SPAIN

### 2. HAZARDS IDENTIFICATION

**Classification for human:** Xi  
**Classification for the environment:** N: Harmful for aquatic organisms. It may cause negative effects in the aquatic environment at long term.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredient	% (p/v)	No. CAS	Frases R
Nicosulfuron	4	111991-09-4	-

### 4. FIRST AID MEASURES

- 4.1. Emergency and first aid procedures
- |                    |   |
|--------------------|---|
| Inhalation .....   | If experiencing any discomfort, immediately remove from exposure. Get medical attention if discomfort does not disappear.   |
| Ingestion .....    | Inducing vomiting is not recommended. Rinse mouth and drink water or milk. If vomiting does occur, rinse mouth and drink fluids again. Consult a physician immediately.   |
| Eye contact .....  | Immediately flush eyes with much water or eyewash solution, occasionally opening eyelids, until no evidence of chemical remains. Remove contact lenses after a few minutes and flush again. See physician if irritation persists. |
| Skin contact ..... | Immediately flush skin with much water while removing   |

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contaminated clothing and footwear. Wash with water and soap. See physician if any symptom develops.

4.2. Note to physician .....

There is no specific antidote against this substance. Treatment is supportive and symptomatic after decontamination. Gastric lavage or administration of activated charcoal can be considered.

## 5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media and procedure

Dry chemical or carbon dioxide for small fires, water spray or foam for large fires.

Use water spray to keep fire-exposed containers cool. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Fight fire from protected location or maximum possible distance. Avoid heavy hose streams. Dike area to prevent water runoff. Firemen should wear self-contained breathing apparatus and protective clothing.

5.2. Hazardous decomposition products in a fire

The essential breakdown products are volatile, toxic, irritant and inflammable compounds such as nitrogen oxides, sulphur dioxide, carbon monoxide and carbon dioxide.

5.3. Unusual fire and explosion hazards

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## 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal protection .....

Observe all protection and safety precautions when cleaning up spills. Depending on the magnitude of the spill this may mean wearing face mask or safety glasses, chemical resistant clothing, gloves and rubber boots. See section 8.

6.2. Steps to be taken in case of spill .....

It is recommended to have a predetermined plan for the handling of spills. Empty, closable vessels for the collection of spills should be available.

Stop the source of the spill immediately if safe to do so. Contain the spill to prevent any further contamination of surface, soil or water.

Spills on the floor or other impervious surface should be contained or diked and then absorbed onto an absorptive material such as universal binder, Fuller's earth, bentonite or other absorbent clays. Collect the contaminated absorbent in suitable containers. Rinse area with strong industrial detergent and much water. Absorb wash liquid onto absorbent as well and transfer to suitable containers. Wash water must be prevented from entering surface water drains.

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Large spills which soak into the ground should be dug up and transferred to suitable containers.

Spills in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal. Uncontrolled discharge into water courses must be alerted to the appropriate regulatory body.

The used containers should be properly closed and labelled. Refer to section 13 for disposal.

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## 7. HANDLING AND STORAGE

### 7.1. Precautions to be taken in handling

In an industrial environment it is recommended to avoid all personal contact with the product, if possible by using closed systems with remote system control. Otherwise adequate ventilation or local exhaust ventilation is required. The exhaust gases should be filtered or treated otherwise. For personal protection in this situation, see section 8.

For its use as a pesticide, first look for precautions and personal protection measures on the officially approved label on the packaging or for other official guidance or policy in force. If these are lacking, see section 8. The precautions of section 8 are primarily meant for handling of the undiluted product and for preparing the spray solution, but can be recommended for spraying as well.

### 7.2. Precautions to be taken in storing

The product is stable under normal conditions of warehouse storage.

Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. The room should exclusively be used for storage of chemicals. Foodstuffs, drinks, feed or seed should not be present. A warning sign reading "POISON" is recommended. A hand wash station should be available.

### 7.3. Specific use .....

The product is a registered pesticide which may only be used for the applications it is registered for in accordance with a label approved by the regulatory authorities.

### 7.4. Fire and explosion precautions

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Personal exposure limits .....

Not established for nicosulfuron. An exposure limit of 10 mg/m<sup>3</sup> (8-hr TWA) is recommended by the manufacturer.

However, other exposure limits defined by local regulations may exist and must be observed.

### 8.2. Personal protection .....

When used in a closed system, personal protection equipment will not be required. The following is meant for other situations, when the use of a closed system is not possible, or when it is necessary to open the system. Consider the need to render equipment or piping system non-hazardous before opening.

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#### Respiratory protection

The product is not likely to present an airborne exposure concern during normal handling, but in the event of a discharge of the material which produces a heavy vapour or mist, workers should put on officially approved face mask or respiratory protection equipment with a universal filter type including particle filter.



#### Protective gloves ..

Wear chemical resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber or viton. The breakthrough times of these materials for nicosulfuron are unknown, but it is expected that they will give adequate protection based on the low dermal toxicity of the substance.



#### Eye protection .....

Wear goggles or safety glasses. It is recommended to have an eye wash fountain immediately available in the work area when there is a potential for eye contact.



#### Other protection ....

Wear appropriate protective clothing to prevent skin contact.

#### 8.3. Work/hygienic practices .....

Keep all unprotected persons and children away from working area.

Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Wash thoroughly with water and soap after handling. Remove contaminated clothing immediately and wash before reuse.

#### 8.4. Environmental exposure controls

Do not discharge to the environment. See section 13 for disposal.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state .....	Liquid
Colour .....	Off-white
Odour .....	Odourless
Density .....	0.88 g/ml at 20°C
Vapour pressure .....	<b>Nicosulfuron:</b> 25°C: $6 \times 10^{-2}$
pH .....	4.2 (1%) (CIPAC METHOD)
Explosive properties .....	Not explosive
Oxidising properties .....	Not oxidising

### 10. STABILITY AND REACTIVITY

- |  |                                 |
|--|---------------------------------|
| 10.1. Thermal decomposition .....      | Stable at ambient temperatures. |
| 10.2. Hazardous decomposition products | See 5.2.                        |
| 10.3. Materials to avoid .....         | —                               |

### 11. ♣ TOXICOLOGICAL INFORMATION

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- |   |   |
|---|---|
| 11.1. Toxicokinetics, metabolism and distribution | Nicosulfuron is rapidly and moderately absorbed following oral administration. It is widely and evenly distributed in the body. Metabolism is limited. Excretion is rapid as well. There is no evidence for accumulation. |
| 11.2. Acute toxicity .....                        | The product is not considered as harmful by inhalation, in contact with skin or if swallowed. The acute toxicity of the product is measured to be:  |
| Route(s) of entry                                 | - ingestion LD <sub>50</sub> , oral, rat: > 5000 mg/kg  |
|   | - skin LD <sub>50</sub> , dermal, rat: > 5000 mg/kg   |
| 11.3. Irritancy .....                             | Mildly to moderately irritating to skin. May be slightly irritating to eyes.  |
| 11.4. Allergic sensitisation .....                | Caused allergic sensitisation in mice.  |
| 11.5. Carcinogenicity .....                       | No indications of carcinogenic effects are found for <b>nicosulfuron</b> .  |
| 11.6. Effects on reproduction .....               | No effects on fertility are found for <b>nicosulfuron</b> .   |
| 11.7. Teratogenicity .....                        | No indications of teratogenic (birth defects causing) effects of <b>nicosulfuron</b> are found.   |
| 11.8. Mutagenicity .....                          | No indications of mutagenic effects are found for the product.  |

## 12. ♣ ECOLOGICAL INFORMATION

- |                         |   |
|-------------------------|---|
| 12.1. Ecotoxicity ..... | Since <b>nicosulfuron</b> is a herbicide, the product is toxic to many plants, including algae. It is considered as non-toxic to fish, aquatic invertebrates, soil micro- and macroorganisms, birds, mammals and insects. |
|-------------------------|---|

The ecotoxicity of the product is measured to be:

- Fish	Rainbow trout ( <i>Oncorhynchus mykiss</i> ) .....	96-h LC <sub>50</sub> : > 25000
- Invertebrates	Daphnids ( <i>Daphnia magna</i> ) .....	48-h EC <sub>50</sub> : 25000
- Algae	Green algae ( <i>Pseudokirchneriella subcapitata</i> ) .....	CL 50250 mg/L
- Birds	<i>Colinus virginianus</i> .....	LD <sub>50</sub> : > > 50000
		48-h LC <sub>50</sub> , acute oral: 324 µg/bee

## 13. DISPOSAL CONSIDERATIONS

- |                                   |  |
|-----------------------------------|--|
| 13.1. Waste disposal method ..... | Waste that cannot be reused or chemically reprocessed can be disposed of by controlled incineration with flue gas scrubbing or removal to a licensed chemical destruction plant. |
|                                   | Do not contaminate water, foodstuffs, feed or seed by  |

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storage or disposal.

### 13.2. Packaging/container disposal .

Triple rinse (or equivalent) and offer for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

Disposal of waste and packagings must always be in accordance with all applicable local regulations.

## 14. TRANSPORT INFORMATION

### ARD/RID CLASSIFICATION

Proper shipping name .....	Environmentally hazardous substance, liquid, n.o.s. (Nicosulfuron)
Class .....	9
UN no. ....	3082
Packaging group .....	III

### IMDG CLASSIFICATION

Proper shipping name .....	Environmentally hazardous substance, liquid, n.o.s. (Nicosulfuron)
Class .....	9
UN no. ....	3082
Packaging group .....	III
Marine pollutant .....	Marine pollutant

### IATA/ICAO CLASSIFICATION

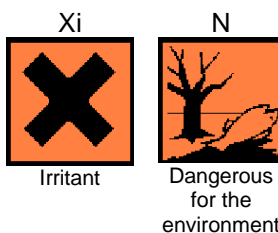
Proper shipping name .....	Environmentally hazardous substance, liquid, n.o.s. (Nicosulfuron)
Class .....	9
UN no. ....	3082
Packaging group .....	III

## 15. ♣ REGULATORY INFORMATION

### 15.1. IN THE EU

Classification and labelling according to 1999/45/EC as amended:

Hazard symbols .....



R-phrases .....	R43: May cause sensitisation by skin contact R51/53. Toxic to aquatic organisms.
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S-phrases .....	S2: Keep out of the reach of children S13: Keep away from food, drink and animal feedingstuffs
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S23: Do not breathe the gas

S24/25: Avoid contact with eyes and skin

S37: Use protective gloves.

S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)

## 16. OTHER INFORMATION

Used R-phrases .....	R36	Irritating to eyes.
	R38	Irritating to skin.
	R41	Risk of serious damage to eyes.
	R43	May cause sensitisation by skin contact.
	R50	Very toxic to aquatic organisms.
	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material should only be used by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.

The information provided in this safety data sheet is believed to be accurate and reliable, but uses of the product may vary and situations unforeseen by CHEMINOVA AGRO, S.A. may exist. The user of the material has to check the validity of the information under local circumstances.