



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Arelon 500

Version 2 (Ireland)

Issuing date: 2014/01/24

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

1.1. Product identifier

Trade name : **Arelon 500**

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

Use : Herbicide

1.3. Details of the supplier of the safety data sheet

Nufarm UK Limited
Wyke Lane
Wyke
Bradford
West Yorkshire BD12 9EJ
United Kingdom
Telephone: +44 (0)1274 691234
Telefax: +44 (0)1274 691176
E-mail address: infouk@uk.nufarm.com

1.4. Emergency telephone number

+44 (0)1274 696603

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

EEC/99/45 :	Xn N	R40 - Limited evidence of a carcinogenic effect. R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
EG_1272/08 :	Carc.2 AquaticAcute1 AquaticChronic1	H351 - Suspected of causing cancer. H400 - Very toxic to aquatic life. H410 - Very toxic to aquatic life with long lasting effects.

2.2. Label elements

according directive 1999/45/EG

Pictogram:



Xn



N

- R40 - Limited evidence of a carcinogenic effect.
 R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S 2 - Keep out of the reach of children.
 S13 - Keep away from food, drink and animal feedingstuffs.
 S36/37 - Wear suitable protective clothing and gloves.
 S46 - If swallowed, seek medical advice immediately and show this container or label.
 S57 - Use appropriate container to avoid environmental contamination.
 S35 - This material and its container must be disposed of in a safe way.

REGULATION (EC) No 1272/2008

Pictogram:



GHS08



GHS09

Signal word: Warning

- H351 - Suspected of causing cancer.
 H410 - Very toxic to aquatic life with long lasting effects.
- P201 - Obtain special instructions before use.
 P273 - Avoid release to the environment.
 P281 - Use personal protective equipment as required.
 P308 + P313 - IF exposed or concerned: Get medical advice/ attention.
 P391 - Collect spillage.
 P405 - Store locked up.
 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.
- P202 - Do not handle until all safety precautions have been read and understood.

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : suspension concentrate (SC)
Isoproturon 500g/l.

3.2. Mixtures

Components:

Isoproturon

CAS-No.: 34123-59-6
EINECS-No. / ELINCS No.: 251-835-4
REACH No.:
Concentration: 44.6 % (w/w)

Classification:

EG_1272/08 :	Carc.Cat.2 AquaticAcute1 AquaticChronic1	H351 - Suspected of causing cancer. H400 - Very toxic to aquatic life. H410 - Very toxic to aquatic life with long lasting effects.
EEC/67/548 :	Carc.Cat.3 N	R40 - Limited evidence of a carcinogenic effect. R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Ethandiol

CAS-No.: 107-21-1
EINECS-No. / ELINCS No.: 203-473-3
REACH No.: 01-2119456816-28
Concentration: 1% - 10% (w/w)

Classification:

EG_1272/08 :	AcuteTox.4	H302 - Harmful if swallowed.
EEC/67/548 :	Xn	R22 - Harmful if swallowed.

4. FIRST AID MEASURES

4.1. Description of first aid measures

Eye contact : Rinse eyes and eye-lids thoroughly with plenty of water for at least 15 minutes(remove contact lenses if possible) If eye irritation persists, consult a specialist.

Skin contact : Remove and wash contaminated clothing before re-use. Wash off with soap and water. If symptoms persist, call a physician.

Inhalation : Move to fresh air. Oxygen or artificial respiration if needed. Obtain medical attention.

Ingestion : Do NOT induce vomiting. Rinse mouth. If swallowed, seek medical advice immediately and show this container or label.



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

Symptoms : No information available.

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

Treatment : Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media : Water spray, Dry powder, Sand, Foam, Carbon dioxide (CO₂)

Extinguishing media which shall not be used for safety reasons : High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : In the event of fire (NO_x, CO_x) may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

Further Information : Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. (see Chapter 8)

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up



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Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Sweep up and shovel into suitable containers for disposal.

Additional advice : Never return spills in original containers for re-use.

6.4. Reference to other sections

see Chapter 13

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice : Wear personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Keep tightly closed in a dry, cool and well-ventilated place.

Advice on common storage : Keep away from food, drink and animal feeding stuffs. Keep out of reach of children.

Storage stability

Storage temperature : < 30 °C
: > 0 °C

7.3. Specific end use(s)

none

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace control parameters

Components	CAS-No.	National occupational exposure limits	Note
Isoproturon	34123-59-6		no classification available, (according to S.I. No. 619 of 2001)
Ethandiol	107-21-1	52 mg/m ³	(according to S.I. No. 619 of 2001)



8.2. Exposure controls

Personal protective equipment

- Respiratory protection : In the case of vapour formation use a respirator with filter model ABEK (according to EN 14387:2008-05-01).
- Hand protection : PVC or nitrile-rubber gloves
- Eye protection : Safety glasses, , or:, Goggles
- Skin and body protection : protective suit
- Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands and face before breaks and immediately after handling the product. When using, do not eat, drink or smoke.
- Protective measures : Keep working clothes separately. Avoid contact with the skin and the eyes.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance

- Form : liquid suspension
- Colour : off-white
- Odour : phenol-like
- Boiling point/boiling range : > 100 °C
- Flash point : > 100 °C
- Ignition temperature : The product is not flammable.
- Auto-ignition temperature : 475 °C
- Explosivity : Not explosive
- Vapour pressure : 8.1E-06 Pa
at 25 °C
(Isoproturon)
- Density : ca.1.1 g/cm³
at 20 °C



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Water solubility : dispersible

pH : 7.1

Partition coefficient: n-octanol/water : log POW = 2.5
at 20 °C
(Isoproturon)

Dissociation constant : no data available

Viscosity, dynamic : 148 mPa.s
at 20 °C
Method: OECD 114

Surface tension : 78.1 mN/m

9.2. Other information

none

10. STABILITY AND REACTIVITY

10.1. Reactivity

no data available

10.2. Chemical stability

No decomposition if stored and applied as directed.

10.3. Possibility of hazardous reactions

no data available

10.4. Conditions to avoid

No dangerous reaction known under conditions of normal use.

10.5. Incompatible materials to avoid

Strong oxidizing agents

10.6. Hazardous decomposition products



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no data available

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

- Acute oral toxicity : LD50 rat
Dose: > 5,000 mg/kg
- Acute dermal toxicity : LD50 rat
Dose: > 4,000 mg/kg
- Acute inhalation toxicity : LC50 rat
Exposure time: 4 h
Dose: > 1.34 mg/l
- Skin irritation : Result: No skin irritation
- Eye irritation : Classification: No eye irritation
Result: Mild eye irritation
- Sensitisation : Result: Not sensitizing to skin.
- Carcinogenicity : The active ingredient Isoproturon is classified as a substance which causes concern for man owing to possible carcinogenic effects.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

- Toxicity to birds : Non toxic for birds.
- Toxicity to fish : LC50 *Oncorhynchus mykiss* (Rainbow trout)
Dose: 309 - 556 mg/l
Testing period: 96 h
- NOEC *Oncorhynchus mykiss* (Rainbow trout)
Dose: 95.3 mg/l



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Testing period: 96 h

Toxicity to daphnia : EC50 Daphnia
Dose: > 250 mg/l
Testing period: 48 h

Toxicity to algae : ErC50 Scenedesmus subspicatus
Dose: 0.192 mg/l
Exposure time: 72 h

NOEC Scenedesmus subspicatus
Dose: 0.056 mg/l

EC50 Lemna gibba (Duckweed)
Dose: 0.045 mg/l
Exposure time: 14 d

12.2. Persistence and degradability

Biodegradability : Not readily biodegradable.

12.3. Potential bioaccumulation

Bioaccumulation : Does not bioaccumulate.

12.4. Mobility in soil

Koc = 36 - 241 (Isoproturon)

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6. Other adverse effects

none

13. DISPOSAL CONSIDERATIONS

According to European Directive 2000/532/EC as amended :

Waste Code : 02 01 08 (agrochemical waste containing dangerous substances)



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13.1. Waste treatment methods

- Product : Dispose of in accordance with local regulations.
- Contaminated packaging : Do not re-use empty containers. Dispose at licensed waste disposal site capable of accepting pesticides in compliance with applicable regulations.

14. TRANSPORT INFORMATION

14.1. UN number

UN3082

14.2. Proper shipping name

UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.*(Isoproturon)

14.3. Transport hazard class(es)

ADR/RID :
Class : 9

IMDG :
Class : 9

IATA-DGR :
Class : 9

14.4. Packaging group

ADR/RID : III

IMDG : III

IATA-DGR : III

14.5. Environmental hazards

IMDG
Marine Pollutant : Y

14.6. Special precautions for user



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none

15. REGULATORY INFORMATION

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

Other regulations : The product is classified and labelled in accordance with EC directives or respective national laws.

15.2. Chemical Safety Assessment

none

16. OTHER INFORMATION

Print Date : 2014/01/24

The date format YYYY/MM/DD is used according to ISO 8601.
(Alterations are indicated in the left hand margin by: ||)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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