



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Lupo

Version 1 (UK)

Issuing date: 2014/02/26

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

1.1. Product identifier

Trade name : **Lupo**

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	R22 - Harmful if swallowed.
	Xi	R41 - Risk of serious damage to eyes.
	Xi	R37 - Irritating to respiratory system.
		R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
EG_1272/08 :	EyeDam.1	H318 - Causes serious eye damage.

2.2. Label elements

according directive 1999/45/EG

Pictogram:



Xn

- R22 - Harmful if swallowed.
R41 - Risk of serious damage to eyes.
R37 - Irritating to respiratory system.
R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S39 - Wear eye/face protection.
S38 - In case of insufficient ventilation, wear suitable respiratory equipment.
S57 - Use appropriate container to avoid environmental contamination.
SP 1 - Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

REGULATION (EC) No 1272/2008

Pictogram:



GHS05

Signal word: Danger

- H318 - Causes serious eye damage.
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/ physician.
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.

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 : Aqueous solution of dimethylammonium salts
360g 2,4-D/L + 315g MCPA/L

3.2. Mixtures

Components:

2,4-D DMA

CAS-No.: 2008-39-1
EINECS-No. / ELINCS No.: 217-915-8
REACH No.:
Concentration: 35.27 % (w/w)

Classification:

EG_1272/08 : AcuteTox.4 H302 - Harmful if swallowed.
EyeDam.1 H318 - Causes serious eye damage.
SkinSens.1 H317 - May cause an allergic skin reaction.
AquaticChronic2 H411 - Toxic to aquatic life with long lasting effects.
EEC/67/548 : Xi R41 - Risk of serious damage to eyes.
Xn R22 - Harmful if swallowed.
N R43 - May cause sensitization by skin contact.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

MCPA DMA

CAS-No.: 2039-46-5
EINECS-No. / ELINCS No.: 218-014-2
REACH No.:
Concentration: 30.74 % (w/w)

Classification:

EG_1272/08 : AcuteTox.4 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled
AquaticAcute1 H400 - Very toxic to aquatic life.
AquaticChronic1 H410 - Very toxic to aquatic life with long lasting effects.
EEC/67/548 : Xn R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
N R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

4.1. Description of first aid measures

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.

Skin contact : Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.



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Inhalation : Move to fresh air. If symptoms persist, call a physician.
Ingestion : Rinse mouth. 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

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 (HCl, Cl₂, NO_x, CO) 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

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Use mechanical handling equipment.

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. Keep out of the reach of children.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store at room temperature in the original container.

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

Storage stability

Storage temperature : > 0 °C

7.3. Specific end use(s)

none

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace control parameters
(EH40/2005 Workplace exposure limits)

Components	CAS-No.	National occupational exposure limits	Note
2,4-D DMA	2008-39-1	10 mg/m ³	
MCPA DMA	2039-46-5		no classification available, not listed in EH40/2005



8.2. Exposure controls

Personal protective equipment

Hand protection : PVC or nitrile-rubber gloves

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance

Physical state : liquid at 20 °C ,
Form : Soluble concentrate
Colour : yellowish
Odour : slight amine-like

Melting point/range : no data available

Boiling point/boiling range : no data available

Flash point : > 200 °C

Ignition temperature : no data available

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : Active ingredient is an organic salt. Vapour pressure is negligibly low.

Density : 1.192 g/cm³
at 20 °C

Water solubility : completely miscible

pH : 8.6

Partition coefficient: n-octanol/water : no data available

Dissociation constant : no data available



Viscosity, dynamic : no data available

9.2. Other information

none

10. STABILITY AND REACTIVITY

10.1. Reactivity

no data available

10.2. Chemical stability

No spontaneous or exothermic decomposition up to 100 °C.

10.3. Possibility of hazardous reactions

no data available

10.4. Conditions to avoid

none

10.5. Incompatible materials to avoid

Strong bases

10.6. Hazardous decomposition products

no data available

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity : LD50 rat
Dose: 2,500 mg/kg
Test substance: The toxicological data has been taken from products of similar composition.

Acute dermal toxicity : LD50 rat
Dose: 2,000 mg/kg
Test substance: The toxicological data has been taken from products of similar composition.



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- Acute inhalation toxicity : LC50 rat
Dose: > 5.9 mg/l
Test substance: 500 g/l MCPA DMA
- LC50 rat
Dose: > 5.01 mg/l
Test substance: (2,4-D DMA)
- Skin irritation : rabbit
Result: No skin irritation
Test substance: The toxicological data has been taken from products of similar composition.
- Eye irritation : rabbit
Result: Severe eye irritation
Test substance: The toxicological data has been taken from products of similar composition.
- Sensitisation : Guinea-pig
Result: Did not cause sensitization on laboratory animals.
Test substance: The toxicological data has been taken from products of similar composition.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

- Toxicity to bees : Not toxic to bees.
- Toxicity to fish : LC50 *Oncorhynchus mykiss* (Rainbow trout)
Dose: 50 mg/l
Testing period: 96 h
Test substance: (MCPA)
- LC50 *Pimephales promelas* (Fathead Minnow)
Dose: 100 mg/l
Testing period: 96 h
Test substance: (2,4-D)
- LC50 Toxicity to fish



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Dose: > 357 mg/l
Testing period: 96 h
Test substance: The toxicological data has been taken from products of similar composition.

Toxicity to daphnia : EC50 Daphnia
Dose: 190 mg/l
Testing period: 48 h
Test substance: (MCPA)

EC50 Daphnia
Dose: 100 mg/l
Testing period: 48 h
Test substance: (2,4-D)

EC50 Daphnia
Dose: > 342 mg/l
Testing period: 48 h
Test substance: The toxicological data has been taken from products of similar composition.

Toxicity to algae : EC50 Toxicity to algae
Dose: 24.2 mg/l
Exposure time: 96 h
Test substance: (2,4-D)

EC50 Toxicity to algae
Dose: > 392 mg/l
Exposure time: 120 h
Test substance: (MCPA)

EbC50 Lemna gibba (Duckweed)
Dose: 14 mg/l
Exposure time: 7 d

NOEC Lemna gibba (Duckweed)
Dose: 3.17 mg/l
Exposure time: 7 d

EbC50 Toxicity to algae
Dose: > 350 mg/l
Test substance: The toxicological data has been taken from products of similar composition.

12.2. Persistence and degradability

Biodegradability : Readily biodegradable, according to appropriate OECD test.



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Stability in soil : DT50: 13.6 d
(2,4-D)
DT50: 24 d
(MCPA)

12.3. Potential bioaccumulation

Bioaccumulation : Does not bioaccumulate.

12.4. Mobility in soil

Koc= 5 - 212 (2,4-D)
Koc = 10 - 157 (MCPA)

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)

13.1. Waste treatment methods

Product : In accordance with local and national regulations. Dispose of
product and packaging in accordance with The Green Code.
(The Code of Practice for the safe use of Pesticides on Farms
and Holdings.) A MAFF Publication.

Contaminated packaging : Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1. UN number



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14.2. Proper shipping name

not applicable

14.3. Transport hazard class(es)

ADR/RID :

Not a dangerous substance as defined in the above regulations.

IMDG :

Not a dangerous substance as defined in the above regulations.

IATA-DGR :

Not a dangerous substance as defined in the above regulations.

14.4. Packaging group

not applicable

14.5. Environmental hazards

not applicable

14.6. Special precautions for user

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



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16. OTHER INFORMATION

Print Date : 2014/02/26

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.

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.