



## SAFETY DATA SHEET

according to regulation (EC) no 1907/2006

**Legolas**

Version 1 (UK)

Issue date 11/02/2009

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

#### Product information

Trade name : **Legolas**

Usage : herbicide

Company : Nufarm UK Limited  
Wyke Lane  
Wyke  
Bradford  
West Yorkshire BD12 9EJ  
United Kingdom

Telephone : +44 (0)1274 691234  
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Emergency telephone : **+44(0)1274 696603**

### 2. HAZARDS IDENTIFICATION

Harmful by inhalation, in contact with skin and if swallowed.  
Risk of serious damage to eyes.  
May cause sensitization by skin contact  
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical nature** : Aqueous solution of dimethylammonium salts  
Dichlorprop-P 400g/L, 2,4-D 300g/L and Dicamba 120g/L

Components	CAS-No.	EINECS-No. ELINCS-No.	Symbol(s)	R-phrases(s)	Concentration (w/w)
dichlorprop-P DMA	104786-87-0		Xn	R20/21/22	37.8 %
2,4-D DMA	2008-39-1	217-915-8	Xn, N	R22, R41, R43, R51/53	28.7 %
Dicamba DMA	2300-66-5	218-951-7	Xi	R36, R52/53	11.5 %

### 4. FIRST AID MEASURES

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

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.

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

Ingestion : Do NOT induce vomiting. Rinse mouth. If conscious, drink



plenty of water. If symptoms persist, call a physician.

**Notes to physician**

Treatment : Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

- Specific hazards during fire fighting : In the event of fire (HCl,Cl<sub>2</sub>,CO) may be formed.
- Special protective equipment for fire-fighters : Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
- Suitable extinguishing media : Water spray, Carbon dioxide (CO<sub>2</sub>), Dry powder, Alcohol-resistant foam
- Extinguishing media which shall not be used for safety reasons : High volume water jet
- Further information : Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

**6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions : Wear personal protective equipment. (see Chapter 8)
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
- 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.

**7. HANDLING AND STORAGE**

**Handling**

Safe handling advice : Wear personal protective equipment.

**Storage**

- Requirements for storage areas and containers : Store in original container. Keep containers tightly closed in a cool, well-ventilated place.
- Advice on common storage : Keep out of reach of children. Keep away from food, drink and animal feeding stuffs.



## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Personal protective equipment

- Respiratory protection : No special protective equipment required.
- Hand protection : PVC or nitrile-rubber gloves
- Eye protection : Safety glasses, or, Goggles
- Skin and body protection : lightweight protective clothing
- Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.
- Protective measures : Avoid contact with skin, eyes and clothing. Keep working clothes separately.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

- Form : Soluble concentrate
- Colour : yellow
- Odour : amine-like

### Other data

- Flash point : The product is not flammable.
- Density : ca.1.25 g/cm<sup>3</sup>  
at 20 °C
- pH : 7.5 - 9
- Partition coefficient: n-  
octanol/water : log POW = -0.56  
(dichlorprop-P), (pH 7)
- log POW = -0.83  
(2,4-D), (pH 7)



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log POW = -1.8  
(Dicamba), (pH 7)

Viscosity, dynamic : 134 mPa.s  
at 20 °C

42.1 mPa.s  
at 40 °C

Viscosity, kinematic : 107 mm<sup>2</sup>/s  
at 20 °C

107 mm<sup>2</sup>/s  
at 20 °C

## 10. STABILITY AND REACTIVITY

Thermal decomposition : No decomposition if stored and applied as directed.

Conditions to avoid : No dangerous reaction known under conditions of normal use.

Materials to avoid : Strong acids and strong bases

## 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50 rat  
Dose: 567 mg/kg  
Test substance: Dichlorprop-P

LD50 rat  
Dose: 699 mg/kg  
Test substance: (2,4-D)

LD50 rat  
Dose: 1,707 mg/kg  
Test substance: (Dicamba)

Acute dermal toxicity : LD50 rat  
Dose: > 2,000 mg/kg  
Test substance: (dichlorprop-P)



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LD50 rat  
Dose: > 2,000 mg/kg  
Test substance: (2,4-D)

LD50 rat  
Dose: > 2,000 mg/kg  
Test substance: (Dicamba)

Acute inhalation toxicity : LC50 rat  
Exposure time: 4 h  
Dose: > 2.7 mg/l  
Test substance: (dichlorprop-P)

LC50 rat  
Exposure time: 4 h  
Dose: 4.46 mg/l  
Test substance: (Dicamba)

Skin irritation : Remarks: no data available

Eye irritation : Remarks: no data available

Sensitisation : Remarks: no data available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

Toxicity to fish : LC50  
Dose: 100 mg/l  
Testing period: 96 h  
Test substance: (dichlorprop-P)

LC50  
Dose: 240 mg/l  
Testing period: 96 h  
Test substance: (2,4-D)

LC50  
Dose: 135.3 mg/l  
Testing period: 96 h  
Test substance: (Dicamba)

Toxicity to daphnia : EC50



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Dose: > 100 mg/l  
Testing period: 48 h  
Test substance: (dichlorprop-P)

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

EC50  
Dose: 110.7 mg/l  
Testing period: 48 h  
Test substance: (Dicamba)

Toxicity to algae : EC50  
Dose: 20.3 mg/l  
Exposure time: 72 h  
Test substance: (dichlorprop-P)

EC50  
Dose: 2.1 mg/l  
Exposure time: 72 h  
Test substance: (Dicamba)

### 13. DISPOSAL CONSIDERATIONS

Product : In accordance with local and national regulations.

Contaminated packaging : Do not re-use empty containers. Dispose empty and triple rinsed container within a local disposing system

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

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

### 14. TRANSPORT INFORMATION

UN-Number : **UN 3082**

Description of the goods : UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.\*(2,4-D)



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**IMDG**

Class : 9  
Packaging group : III  
Marine pollutant : Y

**ADR/RID**

Class : 9  
Packaging group : III

**IATA-DGR**

Class : 9  
Packaging group : III

**15. REGULATORY INFORMATION**

Symbol(s)	: Xn N	Harmful Dangerous for the environment
R-phrase(s)	: R20/21/22 R41 R43 R50/53	Harmful by inhalation, in contact with skin and if swallowed. Risk of serious damage to eyes. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	: S24 S26  S37 S39 S35  S57	Avoid contact with skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves. Wear eye/face protection. This material and its container must be disposed of in a safe way. Use appropriate container to avoid environmental contamination.
Other regulations	: The product is classified and labelled in accordance with EC directives or respective national laws.	



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## 16. OTHER INFORMATION

Print Date : 02/11/2009

(Alterations are indicated in the left hand margin by: || )

Full text of any R phrases referred to under heading 3:

- R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
- R22 - Harmful if swallowed.
- R41 - Risk of serious damage to eyes.
- R43 - May cause sensitization by skin contact.
- R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R36 - Irritating to eyes.
- R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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