

**CLOVOTOX**Version 2 / GB  
102000001626

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Revision Date: 07.03.2008

Print Date: 11.07.2008

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name CLOVOTOX  
Product code (UVP) 05922372  
Usage Herbicide  
Company Bayer Environmental Science  
230 Cambridge Science Park  
Milton Road  
Cambridge  
Cambridgeshire CB4 0WB  
Great Britain

Telephone +44(0)1223 226500  
Telefax +44(0)1223 426240  
Responsible Department Email: ukinfo@bayercropscience.com

Emergency telephone number 0800-220876 (UK 24 hr)  
+44(0)1603-242424 (Overseas 24 hr)

**2. HAZARDS IDENTIFICATION****Risk advice to man and the environment**

Risk of serious damage to eyes.  
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Chemical nature**

Soluble concentrate (SL)  
Mecoprop-p 142.5 g/l

**Hazardous components**

| Chemical Name             | CAS-No. / EINECS-No. | Symbol(s) | R-phrase(s)      | Concentration [%] |
|---------------------------|----------------------|-----------|------------------|-------------------|
| Mecoprop-P potassium salt | 66423-05-0           | Xn, N     | R22, R41, R51/53 | 15.80             |

For the full text of the R phrases mentioned in this Section, see Section 16.

**4. FIRST AID MEASURES****General advice**

Remove contaminated clothing immediately and dispose of safely.

**Inhalation**

Move to fresh air. Keep patient warm and at rest. If symptoms persist, call a physician.



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### Skin contact

Wash off thoroughly with plenty of water and soap, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

### Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

### Ingestion

Do NOT induce vomiting. Induce vomiting only, if: 1. patient is fully conscious, 2. medical aid is not readily available, 3. a significant amount (more than a mouthful) has been ingested and 4. time since ingestion is less than 1 hour. (Vomit should not get into the respiratory tract.) Rinse mouth. Keep patient warm and at rest.

### Notes to Physician

#### Symptoms

Local: The product causes irritation of eyes, skin and mucous membranes.

#### Symptoms

Systemic: mild acidosis, tachycardia, Irregular cardiac activity, low blood pressure, Circulatory collapse, cough, Shortness of breath, Vomiting, Diarrhoea, Abdominal pain, rhabdomyolysis, Nausea, somnolence, Coma, Fever, Convulsions

#### Risks

Kidney injury may occur.  
Ingestion may cause liver damage.

#### Treatment

Local treatment:  
Initial treatment: symptomatic.

#### Treatment

Systemic treatment:  
In the event of a mouthful or more being ingested, the following measures should be considered:  
Gastric lavage with charcoal, if necessary further treatment.  
Observe specific parameters: blood pressure, levels of mecoprop in plasma and urine, pH in urine.  
Elimination by dialysis (forced alkaline diuresis).  
There is no specific antidote.

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## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### Extinguishing media which should not be used for safety reasons

High volume water jet

### Specific hazards during fire fighting

Dangerous gases are evolved in the event of a fire.

### Special protective equipment for fire-fighters

In the event of fire and/or explosion do not breathe fumes.  
In the event of fire, wear self-contained breathing apparatus.

### Further information

Remove product from areas of fire, or otherwise cool containers with water in order to avoid



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pressure being built up due to heat.  
Whenever possible, contain fire-fighting water by diking area with sand or earth.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions

Keep people away from and upwind of spill/leak.  
Avoid contact with spilled product or contaminated surfaces.  
When dealing with a spillage do not eat, drink or smoke.

### Environmental Precautions

Do not allow to get into surface water, drains and ground water.  
If spillage enters drains leading to sewage works inform local water company immediately.  
If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

### Methods for Cleaning Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).  
Keep in suitable, closed containers for disposal.  
Clean floors and contaminated objects with plenty of water.

### Additional Advice

Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.  
Check also for any local site procedures.

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## 7. HANDLING AND STORAGE

### Handling

#### Advice on safe handling

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice.  
Use only in area provided with appropriate exhaust ventilation.

#### Advice on protection against fire and explosion

No special precautions required.

### Storage

#### Requirements for storage areas and containers

Store in a place accessible by authorized persons only.  
Keep away from direct sunlight.  
Keep containers tightly closed in a dry, cool and well-ventilated place.  
Protect from freezing.

#### Storage stability

##### Other data

Storage temperature should ideally lie between 0 and 40 °C, however, storage for two weeks at 54 °C has shown no adverse effects regarding product safety or stability.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal

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**protective equipment wherever practicable. Refer also to COSHH Essentials.**

**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

|                          |   |
|--------------------------|---|
| Respiratory Protection   | No personal respiratory protective equipment normally required. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance. |
| Hand Protection          | Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness 0,40 mm). Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet.   |
| Eye protection           | Wear goggles conforming to EN166 (Field of Use 5 or equivalent).  |
| Skin and body protection | Wear standard coverall and type 6 suit.<br>Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.  |
| Hygiene measures         | When using, do not eat, drink or smoke.<br>Remove soiled clothing immediately and clean thoroughly before using again.<br>Wash hands immediately after work, if necessary take a shower.  |

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**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Colour yellowish

**Safety data**pH 8.0 - 9.0  
Determined in the undiluted form.

Flash point &gt; 100 °C

Density approx. 1.059 g/cm<sup>3</sup> at 20 °C

Water solubility miscible

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**10. STABILITY AND REACTIVITY**

Conditions to Avoid Extremes of temperature and direct sunlight.



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|                     |  |
|---------------------|--|
| Hazardous Reactions | No hazardous reactions when stored and handled according to prescribed instructions.<br>Stable under recommended storage conditions. |
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### 11. TOXICOLOGICAL INFORMATION

|                           |  |
|---------------------------|--|
| Acute Oral Toxicity       | LD50 (rat) > 2,000 mg/kg                   |
| Acute Inhalation Toxicity | LC50 (rat) > 20 mg/l<br>Exposure time: 4 h |
| Acute Dermal Toxicity     | LD50 (rat) > 2,000 mg/kg                   |
| Skin Irritation           | No skin irritation. (rabbit)               |
| Eye Irritation            | Severe eye irritation. (rabbit)            |
| Sensitization             | Non-sensitizing. (guinea pig)              |

#### Further information

The above values are calculated as prescribed by the "Conventional Method" according to 1999/45/EC.

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### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity effects

|                     |   |
|---------------------|---|
| Toxicity to Fish    | LC50 (Lepomis macrochirus (Bluegill sunfish)) > 100 mg/l<br>Exposure time: 96 h<br>The value mentioned relates to the active ingredient mecoprop. |
| Toxicity to daphnia | EC50 (Daphnia) > 270 mg/l<br>Exposure time: 48 h<br>The value mentioned relates to the active ingredient mecoprop.                                |
| Toxicity to algae   | EC50 (Pseudokirchneriella subcapitata) > 270 mg/l<br>Exposure time: 72 h<br>The value mentioned relates to the active ingredient mecoprop.        |
| Toxicity to algae   | EC50 (Lemna gibba (duckweed)) 40.2 mg/l<br>The value mentioned relates to the active ingredient mecoprop.   |

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### 13. DISPOSAL CONSIDERATIONS

#### Product

In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).



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### Contaminated packaging

Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times.

Add washings to sprayer at time of filling.

Dispose of empty and cleaned packaging safely.

Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose.

Return large containers to supplier.

Follow advice on product label and/or leaflet.

### Waste key for the unused product

020108 agrochemical waste containing dangerous substances

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## 14. TRANSPORT INFORMATION

According to national and international transport regulations not classified as dangerous goods.

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## 15. REGULATORY INFORMATION

**This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3 and any subsequent amendments.**

Classification:

Hazard warning labelling compulsory

Hazardous components which must be listed on the label:

- Mecoprop-P potassium salt

Symbol(s)

Xi                      Irritant

R-phrases)

R41                      Risk of serious damage to eyes.

R52/53                      Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

S26                      In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39                      Wear eye/face protection.

### CLASSIFICATION ACCORDING TO SPECIFIC UK REGULATIONS:

**The labelling information below is that which has been approved under 'The Control of Pesticides Regulations 1986' and/or 'Part III of the Food and Environment Protection Act 1985' and/or 'Plant Protection Product Regulations 1999' and any subsequent amendments and may differ from that indicated by any toxicological and/or other testing otherwise indicated in this 'Safety Data Sheet'.**

Symbol(s)

Xi                      Irritant

R-phrases(s)

R36                      Irritating to eyes.

Exceptional labelling

To avoid risks to man and the environment, comply with the instructions for use.



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Further information

WHO-classification: II (Moderately hazardous)

## 16. OTHER INFORMATION

### Further information

Text of R phrases mentioned in Section 3:

|        |   |
|--------|---|
| R22    | Harmful if swallowed.   |
| R41    | Risk of serious damage to eyes.   |
| R51/53 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

The above information is intended to give general health and safety guidance on the storage and transport of the product.

It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.

The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.

No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.