

**TO CAUSE A HAZARD IN THE USE, STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE**

**PRECAUTIONS:**

1. Handle with care; avoid any contact, poisonous when swallowed or inhaled and may cause eye and skin irritation.
2. Do not eat, drink or smoke whilst mixing, applying, handling or before washing hands and face.
3. **WEAR PROTECTIVE CLOTHING**, i.e. overall, rubber gloves, and rubber boots and a face-shield while handling or applying **Decis Forte**.
4. Do not inhale fumes or spray mist. Do not spray against the wind.
5. Remove protective clothing on completion of spraying, wash thoroughly with soap and water, and wash contaminated clothing daily.
6. Clean applicator after use, dispose of wash water where it will not contaminate crops, grazing, rivers and dams.
7. **KEEP OUT OF REACH OF CHILDREN, UNINFORMED PERSONS AND ANIMALS.**
8. **STORE IN A COOL, DRY PLACE AWAY FROM FOOD AND FEEDSTUFFS IN ORIGINAL CONTAINER, KEEP UNDER LOCK AND KEY.**
9. **FLAMMABLE** - Do not store near open flame
10. **TOXIC TO FISH AND WILD LIFE. DO NOT CONTAMINATE DRINKING POOLS, DAMS, RIVERS AND WATERWAYS.**
11. **CONTAINERS MUST BE COMPLETELY EMPTIED BEFORE BEING DISPOSED OF. THEREAFTER, RINSE THE CONTAINER THREE TIMES WITH WATER AND ADD THE RINSING TO THE CONTENTS OF THE SPRAY TANK BEFORE DESTROYING THE EMPTY CONTAINER.**
12. **DESTROY EMPTY CONTAINER BY PUNCTURING AND FLATTENING AND BURY IN A SAFE PLACE SO AS NOT TO CONTAMINATE ARABLE LAND OR GROUNDWATER. DO NOT USE FOR ANY OTHER PURPOSE.**
13. **RE-ENTRY:** Do not enter treated area within 1 day after treatment unless wearing protective clothing.

**SYMPTOMS OF POISONING:** Dizziness, headache, listlessness, nausea and vomiting, abdominal pain, muscular cramping of limbs, convulsions and unconsciousness.

**FIRST AID:**

1. Remove patient from source of poisoning to fresh air and remove contaminated clothing
2. If skin is contaminated, wash affected body areas of skin thoroughly with soap and water
3. If eyes are contaminated, flush well with clean water for at least 15 minutes
4. In case of inhalation, move patient to fresh air and keep patient re-assured, place and transport patient in a recovery position to the nearest hospital.
5. If swallowed, wash out mouth with water, give water to drink and do not induce vomiting.
6. Show container with label to attending doctor.

**NOTE TO PHYSICIAN:** Treatment: Treat symptomatically. Skin: Apply vitamin E cream. Eye: Can cause severe pain. Instillation of local anesthetic drops e.g. 1% amethocaine hydrochloride eye drops. Give analgesics when necessary. Monitor respiratory and cardiac functions. Gastric lavage - administer activated charcoal, endotracheal intubation and artificial respiration when necessary. Haemodialysis, perfusion. Anti-convulsion therapy: Administer Diazepam intravenously. Adrenergic compounds and atropine are not suitable and are contra-indicated in therapy. Complete recovery from over-exposure is spontaneous. Must not be confused with organophosphate intoxication.

**WARRANTY:** Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the pests to the remedy concerned as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.



Reg. No. 07-D-110-30

CONTENTS: 1 L



**DANGEROUS POISON**

<b>COMPOSITION:</b>	<b>MASS/VOLUME</b>
deltamethrin .....	100 g/l
inert ingredients .....	900 g/l

Chemical Group : pyrethroid

**A CONTACT AND STOMACH INSECTICIDE FOR THE CONTROL OF CUTWORM ON TOBACCO, HELIOTHIS, RED & SPINY BOLLWORMS, STAINERS, JASSIDS AND LEAF-EATERS ON COTTON**



HARMFUL



**Decis Forte** is an emulsifiable concentrate, contact and stomach insecticide for the control of cutworm on tobacco, *Heliothis* bollworm, Red bollworm, Spiny bollworm, Stainers, Jassids and Leaf-eaters on cotton.

**DIRECTIONS FOR USE:** Use only as directed.

CROP	PESTS	DOSAGE	APPLICATION REMARKS																							
Cotton	<i>Heliothis</i> bollworm, Red bollworm, Spiny bollworm, Stainers, Jassids and Leaf-eating caterpillars	<b>Lance:</b> 0.4 - 0.9 m high - 33 m/ha Over 0.9 m high - 50 m/ha <b>NB.</b> One Knapsack sprayer capacity 15 litres requires 5 ml of <b>Decis Forte</b>	<b>Application methods:</b> <table border="1"> <tr> <td rowspan="2">Crop Height</td> <td colspan="5">Recommended spray volumes/ha</td> </tr> <tr> <td>Lance</td> <td>Tail-boom</td> <td>U.L.V</td> <td>Mist-blower</td> <td>Aerial</td> </tr> <tr> <td>Plants 0.4 - 0.9m</td> <td>65 ℓ</td> <td>100 ℓ</td> <td>3.3 ℓ</td> <td>65 ℓ</td> <td>10 ℓ</td> </tr> <tr> <td>Plants over 0.9m</td> <td>100 ℓ</td> <td>150 ℓ</td> <td>5 ℓ</td> <td>100 ℓ</td> <td>15 ℓ</td> </tr> </table>	Crop Height	Recommended spray volumes/ha					Lance	Tail-boom	U.L.V	Mist-blower	Aerial	Plants 0.4 - 0.9m	65 ℓ	100 ℓ	3.3 ℓ	65 ℓ	10 ℓ	Plants over 0.9m	100 ℓ	150 ℓ	5 ℓ	100 ℓ	15 ℓ
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<b>Tail-boom:</b> 0.4 - 0.9 m high - 33 m/ha Over 0.9 m high - 50 m/ha	<b>U.L.V</b> Mix 10 m <sup>3</sup> <b>Decis Forte</b> with 640 m <sup>3</sup> water and 350 m <sup>3</sup> molasses and apply as shown under remarks.	<b>Mist-blower:</b> 0.4 - 0.9 m high - 33 m/ha Over 0.9 m high - 50 m/ha	<b>NOTE:</b> Sprays are dependent on weekly scouting results. <b>NOTE: Pyrethroid window period: Decis Forte is only recommended for use between the following periods</b>																							
<b>Aerial:</b> 0.4 - 0.9 m high - 33 m/ha Over 0.9 m high - 50 m/ha	<table border="1"> <tr> <th>Area</th> <th>Start</th> <th>End</th> </tr> <tr> <td>South east lowveld</td> <td>25th December</td> <td>End of February</td> </tr> <tr> <td>Middle veld &amp; elsewhere</td> <td>1st February</td> <td>End of season</td> </tr> </table>	Area	Start	End	South east lowveld	25th December	End of February	Middle veld & elsewhere	1st February	End of season	<b>Hand Applied Drench:</b> Apply one size 30 m <sup>3</sup> fertilizer cup of mixture to each seedling, ensuring thorough wetting of the stem and the soil surrounding the base of the seedling.															
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South east lowveld	25th December	End of February																								
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Tobacco Approved by TRB Certificate No. 08-11-D-11	Cutworms	10 m <sup>3</sup> <b>Decis Forte</b> / 100 ℓ water																								

Packed For: Bayer Zimbabwe (Pvt) Ltd  
P.O. Box AY 78, Amby, Harare, Zimbabwe.  
Tel. 487211/487245/7 Fax. 487242  
Emergency Tel. +27(21) 931-6129  
Manufactured by Bayer (Pty) Ltd  
**Decis®** is a registered trademark of Bayer CropScience AG, Germany



**Bayer CropScience**

Batch No.: See on pack  
Date of Manufacture: See on pack

Zim/1009/Decis Forte 1L/Full Text Label  
Code: 79547552B

# MATERIAL SAFETY DATA SHEET

*Date of issue* : 13/04/00  
*Date of edition* : 13/04/00  
*Date of revision* :  
*Version* :

N° AGR 2304

## 1. IDENTIFICATION OF THE SUBSTANCE OR PREPARATION AND THE COMPANY

*Trade name* : **DECIS FORTE**  
*Product code* : AEF03264000EC11A3  
*Supplier* : **Bayer (Pty)Ltd**

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

### *Composition/Information on ingredients*

*Chemical family* : Pyrethroids.  
*Kind of use* : Insecticide, emulsifiable concentrate.

### *Hazardous constituents*

CAS	EINECS	Wording	Concentration	Symbol	Risks Phrases
000108-94-1	203-631-1	Cyclohexanone	> 300 g/l	Xn	10-20
064742-95-6	265-199-0	Petroleum distillate	> 400 g/l	Xn, N	10-37-51/53-65
052918-63-5	258-256-6	Deltamethrin	100 g/l	T, N	20-25-50/53

## 3. HAZARDS IDENTIFICATION

### *Symbols and labelling*



**Xn : Harmful**

*Main hazards* : Harmful if swallowed.  
 Risk of serious damage to eyes.  
 Flammable.

*Specifics risks* : Dangerous to aquatic organisms.

**Main acute symptoms** : The following symptoms may occur.  
 Local : skin and eyes paraesthesiae which may be severe. Usually transient with resolution within 24 hours.  
 Systemic : dizziness, headache, listlessness, nausea and vomiting, epigastric pain, muscular fasciculation of limbs, unconsciousness, convulsions and coma (very high doses)

#### 4. FIRST-AID MEASURES IN CASE OF EXPOSURE

**Instructions for physician** : Symptomatic treatment after decontamination.  
 Local contamination:  
 Skin : apply vitamin E cream or simple toilet milks.  
 Eye : instillation of local anaesthetic drops e.g. 1% amethocaine hydrochloride eye drops.  
 Give analgesics as necessary.  
 Can cause severe pain.  
 Systemic poisoning :  
 Monitor function : respiratory, cardiac.  
 Observe specific parameters : electrocardiograph, check for pulmonary oedema in event inhalation.  
 Gastric lavage. Charcoal administration.  
 Endotracheal intubation. Artificial respiration as necessary.  
 Elimination by : dialysis, haemo-perfusion.  
 Anticonvulsions therapy : diazepam i. v.  
 Contraindications : 1. Adrenergic compounds. 2. Atropine.  
 Recovery : spontaneous.  
 Must not be confused with organophosphorous compounds.

**Inhalation** : Remove to fresh air.  
 Keep at rest.  
 If required, seek medical advice immediately.

**Skin contact** : Carefully remove contaminated clothing.  
 Wash affected area with soap and water.  
 In case of persistent irritation, seek medical advice.

**Eyes Contact** : Rinse immediately with clean water for at least 15 minutes and obtain medical aid.

**Ingestion** : Wash out mouth with water.  
 Do not induce vomiting.  
 Give water to drink.  
 Keep patient at rest.  
 Obtain medical advice immediately.

## 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media** : Water spray jet, CO<sub>2</sub>, foam, dry chemical.
- Unsuitable extinguishing media** : Jet of water from a fire hose.
- Fire and explosion hazards** : Flammable  
In case of fire, the product emits toxic and irritating fumes.
- Special protective equipment** : Before intervention, wear suitable protective clothing.  
Wear a self-contained breathing apparatus.
- Other recommendations** : Avoid rejection of extinguishing water in the environment.  
Cool with water the containers against excessive heat.  
Keep away from heat and flame if possible.  
Do not breathe fumes.

## 6. ACCIDENTAL RELEASE MEASURES

- Personal protection** : Before intervention wear protective equipment (cf § 8-2).  
Avoid contact with chemical or contaminated surfaces.
- Environment precautions** : Absorb with liquid binding material (sand, cement, lime).  
Sweep and store the material collected into a suitable container.  
Keep safe for disposal according to regulations.  
Prevent entry into drains, sewers and watercourses.
- Clean-up procedures** : Rinse the contaminated area with a large quantity of water and cleaning agent.  
Store the washing waters into a suitable container.

## 7. HANDLING AND STORAGE

### HANDLING

- Technical measures** : Use local exhaust ventilation at the source of the contamination.  
Provide an ocular shower and sanitary installations near the working place.
- Special protection measures** : Do not spray facing the wind.
- Specifics precautions** : Wash hands and exposed part of the body with soap after any handling.

### STORAGE

- Sensitivity to damp** : Not observed.
- Sensitivity to light** : Keep protected from direct sunlight.
- Sensitivity to oxidation** : Not observed.
- Storage temperature** : Keep at ambient temperature.
- Low temperature to be avoided** : Protect from frost (crystal formation reversible).
- :

<b>Special storage requirement</b>	Keep away from food, drink and animal feeding stuffs.
<b>Storage facilities</b>	: Keep container tightly closed in cool and well-ventilated place.
<b>Recommended packaging material</b>	: Aluminium, iron, tinfoil, steel.
<b>Packaging material to be avoided</b>	: HPDE and PET
<b>Other recommendations</b>	: Keep only in the original container. Do not re-use empty containers.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### CONTROL OF EXPOSURE

**STEL** : 25 ppm.

### PERSONAL PROTECTION

**Respiratory protection** : Wear mask with organic vapour cartridge (A type).

**Hands protection** : Wear suitable gloves.

**Eyes protection** : Wear chemical goggles .

**Skin and body protection** : Wear suitable protective clothing.

**Specific hygiene measures** : Use only in well-ventilated area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** : Light yellow liquid, aromatic odor.

**PH** : 4 - 5 at 5% in water.

**Characteristic temperatures** : Freezing point : -10°C.

**Flash point** : 43°C (closed cup).

**Inflammability limits** : Lower 0,6 % v/v.  
Upper 9,5 % v/v.

**Density** : 0,95 to 0,97 at 20°C.

**Solubility** : Emulsifiable in water.

**Partition coefficient** : Deltamethrin : Log Pow = 4,6

**Octanol/Water**

## 10. STABILITY AND REACTIVITY

**Products of decomposition** : No hazardous decomposition products known under normal conditions of use and storage.

**Avoided conditions** : Keep away from heat and source of ignition.

### 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity</b>	: LD 50 oral route/rat : 658 mg/kg. LD 50 cutaneous/rabbit : > 4000 mg/kg.
<b>Irritant potential</b>	: Cutaneous irritation (rabbit) : not irritating. Ocular irritation (rabbit) : very irritating.
<b>Sensitization</b>	: Deltamethrin : not sensitizing (guinea pig) (Buehler). Due to the presence of solvents in the preparation dermatosis may occur by repeated and prolonged contact with skin.
<b>Chronic toxicity</b>	: Deltamethrin : Not mutagenic. Not teratogenic. Not carcinogenic. Deltamethrin : NOEL = 1 mg/kg.bw/day.
<b>Comments/symptoms</b>	: Some cutaneous sensations may occur, such as burning, stinging sensations on the face and mucosa, without lesions and transient some hours, maximum 24 h. Due to the presence of solvents in the preparation, may cause lung damage if swallowed.

### 12. ECOLOGICAL INFORMATION

<b>Environment protection</b>	: Do not throw out into drains, sewers, watercourses or environment.
<b>Mobility</b>	: Deltamethrin : fixed in most soils.
<b>Ecotoxicity</b>	: Deltamethrin : LC 50 (96h) fish : 0.001 mg/l. EC 50 (48h) daphnia: 0.0035 mg/l. IC 50 (72) algae: >9.1 mg/l.

### 13. DISPOSAL CONSIDERATIONS

<b>Waste and residue</b>	: Incineration in accordance with the local waste regulation authority. Do not discharge washing waters in public sewers and water sources (ponds, streams...)
<b>Destruction soiled packaging</b>	: Empty and triple rinse. Make the container unusable. Disposal must be treated according to official regulation.

### 14. TRANSPORT INFORMATION

<b>N° UN</b>	: 1993
<b>BY ROAD</b>	

<b>Transport assimilation</b>	: Flammable liquid, n.o.s. (Deltamethrine - Cyclohexanone - Hydrocarbure aromatique)
<b>Class</b>	: 3
<b>Item number</b>	: 31°C)
<b>Label</b>	: 3
<b>Hazard Code</b>	: 30
<b>O.A.C.I. (By Air)</b>	
<b>Transport assimilation</b>	: Flammable liquid, n.o.s. (Deltamethrin - Cyclohexanone - Petroleum distillate)
<b>Class</b>	: 3
<b>Group</b>	: III
<b>Label</b>	: 3
<b>Passengers</b>	: 309 (60 L)
<b>Cargo</b>	: 310 (220 L)
<b>I.M.D.G. (By Sea)</b>	
<b>Transport assimilation</b>	: Flammable liquid, n.o.s. (Deltamethrin - Cyclohexanone - Petroleum distillate)
<b>Class</b>	: 3.3
<b>Group</b>	: III, page 3345
<b>Label</b>	: 3
<b>Mark</b>	: Marine pollutant

#### SOUTH AFRICA

##### Road/Rail Transport ADR/RID

UN No.	: 1993
Class - primary	: 3
- subsidiary	: -
UN Pack Group	: III
P.S.N.	: Flammable liquid, n.o.s. (Deltamethrin - Cyclohexanone, Aromatic Hydrocarbons)

## 15. REGULATORY INFORMATION

### COMMUNITY REGULATIONS

**Labelling EC** : Labelling according to EC regulations.

### LOCAL REGULATIONS OF COUNTRY

**Listed facilities** : 1155 - 1432 (France).

**Professional diseases** : Concerned, boards 4bis and 84 (France).

**Biomonitoring** : Blood test (France).

### Symbols and labelling



**Xn : Harmful**

### SPECIAL RISKS (R)

10	: Flammable.
22	: Harmful if swallowed.

41 : Risk of serious damage to eyes.

**SAFETY ADVICE (S)**

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13 : Keep away from food, drink and animal feedingstuffs.

2 : Keep out of the reach of children.

20/21 : When using do not eat, drink or smoke.

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

37/39 : Wear suitable gloves and eye/face protection.

46 : If swallowed, seek medical advice immediately and show this container or label.

61 : Avoid release to the environment. Refer to special instructions/Safety data sheets.

**16. OTHER INFORMATION**

**Further indications** : Some organo-phosphorous insecticides can reduce metabolism rate and thus enhance deltamethrin toxicity - therefore, it is not advisable to proceed to such associations, consult the supplier.  
Refer also to technical instructions for use.

**Document on reference** : In-house data .

NOTA: (\*) up-dated data.

The information given in this data sheet has been introduced in accordance with the guidelines established by article 10 of EEC directive, dated March 5, 1991. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to apply any additional national requirements.