

**STEWARD® 150EC**

Version 3.2

Revision Date 15.11.2010

Ref.130000027381

This SDS adheres to the standards and regulatory requirements of the European Union and may not meet the regulatory requirements in other countries.

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

Product name : STEWARD® 150EC

 Synonyms : B12109700  
 : DPX-KN128 150EC

Use of the Substance/Mixture : Insecticide

 Company : DuPont de Nemours South Africa (Pty) Ltd  
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**2. HAZARDS IDENTIFICATION**

Harmful if swallowed.

Irritating to skin.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No.	EC-No.	Registration number	Classification	Concentration [%]
Indoxacarb (S-Enantiomer)	173584-44-6			T; R25 R43 N; R50/53	15,84

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

**4. FIRST AID MEASURES**

General advice : Never give anything by mouth to an unconscious person.

Inhalation : Move to fresh air. Artificial respiration and/or oxygen may be necessary. Call a physician or poison control centre immediately.

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- Skin contact : Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before re-use.
- Eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists, consult a specialist.
- Ingestion : Call a physician or poison control centre immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If victim is conscious: Rinse mouth with water.

**5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>),
- Extinguishing media which shall not be used for safety reasons : High volume water jet, (contamination risk),
- Specific hazards during fire fighting : Hazardous decomposition products formed under fire conditions. Carbon dioxide (CO<sub>2</sub>) nitrogen oxides (NO<sub>x</sub>)
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
- Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- (on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers / tanks with water spray.

**6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions : Control access to area. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ventilate spill area. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Prevent further leakage or spillage if safe to do so. Use appropriate container to avoid environmental contamination. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for cleaning up : Clean-up methods - small spillage Soak up with inert absorbent material. Sweep up or vacuum up spillage and collect in suitable container for disposal.



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Clean-up methods - large spillage Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Large spills should be collected mechanically (remove by pumping) for disposal. Collect leaking liquid in sealable (metal/plastic) containers.

Additional advice : Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

### 7. HANDLING AND STORAGE

#### Handling

Advice on safe handling : Use only according to our recommendations. Wear personal protective equipment. For personal protection see section 8. Use only clean equipment. Provide adequate ventilation. Do not breathe vapours or spray mist. When opening containers, avoid breathing vapours that may be emanating. Prepare the working solution as given on the label(s) and/or the user instructions. Use prepared working solution as soon as possible - Do not store. To avoid spills during handling keep bottle on a metal tray. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Never return unused material to storage receptacle. Avoid exceeding of the given occupational exposure limits (see section 8).

Advice on protection against fire and explosion : Keep away from heat and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded.

#### Storage

Requirements for storage areas and containers : Store in a place accessible by authorized persons only. Store in original container. Keep in properly labelled containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Advice on common storage : No special restrictions on storage with other products.

Storage temperature : > 3 - < 54 °C

Other data : Protect from freezing. Stable under recommended storage conditions.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Engineering measures

Ensure adequate ventilation, especially in confined areas.

#### Personal protective equipment

Respiratory protection : Manufacturing and processing work: Half mask with vapour filter A1 (EN 141)

Respiratory protection : Mixer and loaders must wear: Half mask with vapour filter A1 (EN 141)

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	Respiratory protection	:	Spray application - outdoor: Half mask with a particle filter FFP1 (EN149)
	Respiratory protection	:	Spray application - indoor: Half mask with a particle filter FFP1 (EN149)
	Hand protection	:	<p>Material: Nitrile rubber            Glove thickness: 0,4 - 0,7 mm            Glove length            : Gauntlets            Protection index: Class 6            Wearing time: &gt; 480 min</p> <p>The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., The suitability for a specific workplace should be discussed with the producers of the protective gloves., Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough., Before removing gloves clean them with soap and water.</p>
	Eye protection	:	Safety glasses with side-shields conforming to EN166
	Skin and body protection	:	<p>Manufacturing and processing work: Full protective clothing Type 6 (EN 13034)</p> <p>Mixer and loaders must wear: Full protective clothing Type 6 (EN 13034)            Rubber apron Nitrile rubber boots (EN 13832-3 / EN ISO 20345).</p> <p>Spray application - outdoor: Full protective clothing Type 4 (EN 14605) Nitrile rubber boots (EN 13832-3 / EN ISO 20345).</p> <p>Spray application - indoor: Full protective clothing Type 4 (EN 14605) Nitrile rubber boots (EN 13832-3 / EN ISO 20345).</p> <p>Refer to the product label for PPE requirements for early entry.</p>
	Hygiene measures	:	<p>Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands and face before breaks and immediately after handling the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. Remove clothing/PPE immediately if material gets inside. For environmental protection remove and wash all contaminated protective equipment before re-use. Dispose of rinse water in accordance with local and national regulations.</p>
	Protective measures	:	<p>The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated. Only protected handlers may be in the area during application.</p>

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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Form	:	liquid,
Colour	:	amber,
Odour	:	of burnt sugar,
pH	:	6,6 at 10 g/l ( 25 °C)
Flash point	:	69 °C
Oxidizing properties	:	The product is not oxidizing.
Explosive properties	:	Not explosive
Density	:	0,947 g/cm <sup>3</sup> at 20 °C
Viscosity, dynamic	:	5,6 mPa.s at 25 °C

**10. STABILITY AND REACTIVITY**

Conditions to avoid	:	Temperature : < 54 °C Protect from frost.
Materials to avoid	:	No materials to be especially mentioned.
Hazardous reactions	:	No dangerous reaction known under conditions of normal use. Polymerization will not occur. No decomposition if stored and applied as directed.

**11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity	:	LD50/ rat: 976,8 mg/kg Method: OECD Test Guideline 425 (Data on the product itself) Information source: Internal study report
Acute inhalation toxicity	:	LC50/ 4 h / rat : > 5,2 mg/l Method: OECD Test Guideline 403 (Data on the product itself) Information source: Internal study report
Acute dermal toxicity	:	LD50/ rat > 5 000 mg/kg Method: OECD Test Guideline 402 (Data on the product itself) Information source: Internal study report
Skin irritation	:	rabbit Result: Irritating to skin. Method: OECD Test Guideline 404 (Data on the product itself) Information source: Internal study report
Eye irritation	:	rabbit Result: No eye irritation Method: OECD Test Guideline 405 (Data on the product itself) Information source: Internal study report

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- Sensitisation : Maximisation Test guinea pig Result: Animal test did not cause sensitization by skin contact. Method: OECD Test Guideline 406 (Data on the product itself)  
Information source: Internal study report
- Mutagenicity assessment  
Indoxacarb (S-Enantiomer) : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.,  
Did not cause genetic damage in animals.
- Carcinogenicity assessment
- Indoxacarb (S-Enantiomer) : Did not show carcinogenic effects in animal experiments.
- Toxicity to reproduction assessment
- Indoxacarb (S-Enantiomer) : Animal testing did not show any effects on fertility.

**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

- Biodegradability : Not readily biodegradable. Estimation based on data obtained on active ingredient.
- Bioaccumulation : This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

**Ecotoxicity effects**

- Toxicity to fish : static test LC50/ 96 h/ Oncorhynchus mykiss (rainbow trout) :: 7,0 mg/l  
Method: OECD Test Guideline 203  
(Data on the product itself) Information source: Internal study report
- Toxicity to algae : static test/ EbC50/ 72 h/ Pseudokirchneriella subcapitata (green algae): 12,5 mg/l  
Method: OECD Test Guideline 201  
(Data on the product itself) Information source: Internal study report
- Toxicity to daphnia : static test / EC50/ 48 h/ Daphnia magna (Water flea): 1,67 mg/l  
Method: OECD Test Guideline 202  
(Data on the product itself) Information source: Internal study report
- Chronic toxicity to fish
- Indoxacarb (S-Enantiomer) : Early Life-Stage/ NOEC/ 90 d/ Oncorhynchus mykiss (rainbow trout): 0,15 mg/l  
Method:
- Chronic toxicity to aquatic Invertebrates
- Indoxacarb (S-Enantiomer) : / NOEC/ 21 d/ Daphnia magna (Water flea): 1 mg/l

**Further information on ecology**

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Additional ecological information : Environmental Hazards: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. Run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply where/when conditions favour runoff. See product label for additional application instructions relating to environmental precautions.

**13. DISPOSAL CONSIDERATIONS**

Product : In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Do not re-use empty containers.

**14. TRANSPORT INFORMATION****ADR**

Class: 9  
 Packaging group: III  
 Classification Code: M6  
 HI No.: 90  
 UN number: 3082  
 Labelling No.: 9  
 Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Indoxacarb)

**IMDG**

Class: 9  
 Packaging group: III  
 UN number: 3082  
 Labelling No.: 9  
 Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Indoxacarb)

Marine pollutant: Marine pollutant.

Further information : Not classified as dangerous in the meaning of air transport regulations., Optional classification as per IATA Special Provision A97.

**15. REGULATORY INFORMATION****Labelling according to EC Directives**

Symbol(s) : Xn Harmful  
 N Dangerous for the environment

Hazardous components: Indoxacarb (S-Enantiomer)

R-phrases : R22 Harmful if swallowed.  
 R38 Irritating to skin.  
 R51/53 Toxic to aquatic organisms, may cause long-term adverse

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effects in the aquatic environment.

S-phrases(s)	:	S 2	Keep out of the reach of children.
		S13	Keep away from food, drink and animal feedingstuffs.
		S20/21	When using do not eat, drink or smoke.
		S24	Avoid contact with skin.
		S37	Wear suitable gloves.
		S46	If swallowed, seek medical advice immediately and show this container or label.
		S35	This material and its container must be disposed of in a safe way.
		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).	

Special labelling of certain mixtures : To avoid risks to man and the environment, comply with the instructions for use.

Sensitising components contains:  
Indoxacarb (S-Enantiomer)  
May produce an allergic reaction.

**16. OTHER INFORMATION****Text of R-phrases mentioned in Section 3**

R25	Toxic if swallowed.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Further information**

Before use read DuPont's safety information., Take notice of the directions of use on the label.

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Significant change from previous version is denoted with a double bar.

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