



## DuPont™ Steward® EC Insecticide

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

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

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DuPont™ Steward® EC Insecticide  
 Tradename/Synonym : DPX-KN128 150EC  
 Indoxacarb 150 EC Insecticide  
 Steward® 150 EC Insecticide  
 Steward EC Insecticide (USA, Australia)  
 Steward 150 EC Insecticide (Pakistan)  
 Steward® EC Insecticide  
 Avaunt 150 EC Insecticide (India, Iran, West Africa)  
 Avaunt 150 EC Insecticide (Egypt, Morocco)  
 Avatar®  
 INDOXACARB: (S)-methyl 7-chloro-2,5-dihydro-2-[[[(methoxy-carbonyl)[4(trifluoromethoxy)phenyl]amino]-carbonyl]indeno[1,2-e][1,3,4]oxadiazine-4a-(3H)-carboxylate

Product Use : Insecticide

Restrictions on use : Do not use product for anything outside of the above specified uses

Manufacturer/Supplier : DuPont  
 4417 Lancaster Pike  
 Wilmington, DE 19805, USA

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)  
 Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)  
 Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

### SECTION 2. HAZARDS IDENTIFICATION

#### Product hazard category

Flammable liquids	Category 4
Acute toxicity (Oral)	Category 4
Specific target organ toxicity - single exposure	Category 2

**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

Specific target organ toxicity -  
repeated exposure

Category 1

**Label content**

Pictogram

:



Signal word

: Danger

Hazardous warnings

: Combustible liquid.  
Harmful if swallowed.  
May cause damage to organs. (Central nervous system)  
Causes damage to organs through prolonged or repeated exposure. (Central nervous system)


**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

**Hazardous prevention measures**

: Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
 Wash skin thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Wear protective gloves/ eye protection/ face protection.  
 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.  
 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.  
 Get medical advice/ attention if you feel unwell.  
 Rinse mouth.  
 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
 Store in a well-ventilated place. Keep cool.  
 Store locked up.  
 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

No applicable data available.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Concentration
Indoxacarb	173584-44-6	15.84 %
Octanol		1 - 5 %
Alkyl Sulfonate Salt		5 - 10 %
Other Ingredients		69.16 - 78.16 %

**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

**SECTION 4. FIRST AID MEASURES**

- General advice : Have the product container or label with you when calling a poison control center or doctor, or going for treatment.  
For medical emergencies involving this product, call toll free 1-800-441-3637.  
See Label for Additional Precautions and Directions for Use.
- Inhalation : Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
- Skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- Eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- Ingestion : Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person.
- Most important symptoms/effects, acute and delayed : No applicable data available.
- Protection of first-aiders : No applicable data available.
- Notes to physician : No applicable data available.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>)
- Unsuitable extinguishing media : High volume water jet, (contamination risk)

**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

- Specific hazards : No applicable data available.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
- Further information : (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.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

- Safeguards (Personnel) : No applicable data available.
- Environmental precautions : Prevent material from entering sewers, waterways, or low areas.
- Spill Cleanup : Soak up with sawdust, sand, oil dry or other absorbent material. Dispose of in an approved container.
- Accidental Release Measures : Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

**SECTION 7. HANDLING AND STORAGE**

- Handling (Personnel) : Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing.
- Handling (Physical Aspects) : No applicable data available.
- Dust explosion class : No applicable data available.
- Storage : Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store product in original container only in a location inaccessible to children and pets. Not for use or storage in or around the home. Keep out of the reach of children.
- Storage period : No applicable data available.


**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

Storage temperature : &gt; 0 °C (&gt; 32 °F)

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Engineering controls : When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.  
**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

**Personal protective equipment**

Skin and body protection : Applicators and other handlers must wear:  
 Long sleeved shirt and long pants  
 Chemical-resistant gloves, Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all greater than or equal to 14 mils  
 Shoes plus socks  
 Personal protective equipment required for early entry:  
 Coveralls worn over long-sleeved shirt and long pants  
 Chemical-resistant gloves, Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all greater than or equal to 14 mils  
 Chemical resistant footwear plus socks

Protective measures : Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Exposure Guidelines  
 Exposure Limit Values**

Indoxacarb			
AEL *	(DUPONT)	1 mg/m3	8 hr. TWA
AEL *	(DUPONT)	0.5 mg/m3	12 hr. TWA
Octanol			
AEL *	(DUPONT)	20 ppm	8 & 12 hr. TWA

**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

Alkyl Sulfonate Salt  
No applicable data available.

\* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

## Appearance

Physical state : liquid  
Form : liquid  
Color : amber

Odor : faint burn smell

Odor threshold : No applicable data available.

pH : 6.6 at 20 °C (68 °F)  
(1% solution in water)

Melting point/range : No applicable data available.

Boiling point/boiling range : No applicable data available.

Flash point : 69 °C

Evaporation rate : No applicable data available.

Flammability (solid, gas) : No applicable data available.

Upper explosion limit : No applicable data available.

Lower explosion limit : No applicable data available.

Vapour Pressure : No applicable data available.

Vapour density : No applicable data available.

Density : at 20 °C (68 °F)

Specific gravity (Relative) : No applicable data available.

**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

density)

Water solubility : No applicable data available.

Solubility(ies) : No applicable data available.

Partition coefficient: n-octanol/water : No applicable data available.

Auto-ignition temperature : No applicable data available.

Decomposition temperature : No applicable data available.

Viscosity, kinematic : No applicable data available.

Viscosity, dynamic : 5.6 mPa.s at 25 °C (77 °F)

Oxidizing Substance : The product is not oxidizing.

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No applicable data available.

Chemical stability : Stable at normal temperatures and storage conditions.

Possibility of hazardous reactions : No applicable data available.

Conditions to avoid : No applicable data available.

Incompatible materials : None reasonably foreseeable.

Hazardous decomposition products : No applicable data available.

**SECTION 11. TOXICOLOGICAL INFORMATION**

DuPont™ Steward® EC Insecticide

Inhalation 4 h LC50 : &gt; 5.2 mg/l , Rat

Dermal LD50 : &gt; 5,000 mg/kg , Rat

Oral LD50 : 977 mg/kg , female, Rat

Skin irritation : Mild skin irritation, Rabbit




**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

Eye irritation : slight irritation, Rabbit

Sensitisation : Did not cause sensitisation on laboratory animals., Guinea pig

## Indoxacarb

Repeated dose toxicity : Inhalation  
Rat  
-  
Target Organs: Central nervous system, Blood  
Central nervous system effects, Incoordination, Increased mortality or reduced survival, altered hematology

Oral  
multiple species  
-

Target Organs: Blood  
altered hematology

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Mutagenicity : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.  
Animal testing did not show any mutagenic effects.

Reproductive toxicity : Animal testing did not show any effects on fertility.  
No toxicity to reproduction

Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

## Octanol

Repeated dose toxicity : Oral  
Rat  
-  
NOAEL: 250 mg/kg  
No toxicologically significant effects were found.

Inhalation  
Rat  
-  
No toxicologically significant effects were found.

Carcinogenicity : Not classifiable as a human carcinogen.  
Animal testing did not show any carcinogenic effects.


**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

Mutagenicity : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.  
Evidence suggests this substance does not cause genetic damage in animals.

Teratogenicity : Animal testing showed no developmental toxicity.

## Alkyl Sulfonate Salt

Repeated dose toxicity : Skin contact  
Rat

-

NOAEL: &gt; 1,000 mg/kg Method: OECD Test Guideline 410

Mutagenicity : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.  
Evidence suggests this substance does not cause genetic damage in animals.  
Evidence suggests this substance does not cause genetic damage in cultured mammalian cells.  
Evidence suggests this substance does not cause genetic damage in cultured bacterial cells.  
Information given is based on data obtained from similar substances.

Reproductive toxicity : Animal testing showed no reproductive toxicity.  
Information given is based on data obtained from similar substances.

## Carcinogenicity

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

**SECTION 12. ECOLOGICAL INFORMATION**

## Aquatic Toxicity

DuPont™ Steward® EC Insecticide

96 h LC50

: Oncorhynchus mykiss (rainbow trout) 7.0 mg/l


**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

72 h ErC50 : Pseudokirchneriella subcapitata (green algae) &gt; 16 mg/l

48 h EC50 : Daphnia magna (Water flea) 1.67 mg/l

## Indoxacarb

90 d Early Life-Stage : NOEC Oncorhynchus mykiss (rainbow trout) 0.15 mg/l

21 d : NOEC Daphnia magna (Water flea) 0.9 mg/l

## Environmental Fate

## Indoxacarb

Bioaccumulation 21 d : Lepomis macrochirus (Bluegill sunfish) OECD Test Guideline 305  
 Bioconcentration factor (BCF) : 77.3  
 Does not bioaccumulate.  
 Information source: Internal study report

## Octanol

Biodegradability : Biodegradable OECD Test Guideline 301  
 Readily biodegradable

Bioaccumulation : Bioaccumulation is unlikely.

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. Do not apply where/when conditions favour runoff. Run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Very toxic to bees. Do not apply this product if bees are visiting the treatment area. See product label for additional application instructions relating to environmental precautions.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste disposal methods - Product : Do not contaminate water, food or feed by disposal. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Contaminated packaging : No applicable data available.


**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

**SECTION 14. TRANSPORT INFORMATION**

IATA_C	UN number	: 3082
	Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (Indoxacarb)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9MI
IMDG	UN number	: 3082
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Indoxacarb)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
	Marine pollutant	: yes (Indoxacarb)

Not regulated by DOT/49 CFR unless shipped in bulk package or by water.

**SECTION 15. REGULATORY INFORMATION**

Other regulations : This Safety Data Sheet is for a pesticide product registered by the US Environmental Protection Agency (USEPA) and is therefore also subject to certain labeling requirements under US pesticide law (FIFRA). These requirements differ from the classification criteria and hazard information required by OSHA for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the mandatory hazard information required by USEPA on the pesticide label:

**Caution**

Harmful if swallowed. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling. Harmful if inhaled. Avoid breathing dust. Avoid breathing vapours or mist. Remove and wash contaminated clothing before re-use. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. This product is toxic to: Mammals Birds

**DuPont™ Steward® EC Insecticide**

Version 2.3

Revision Date 09/25/2015

Ref. 130000027381

Fish Aquatic invertebrates

SARA 313 Regulated Chemical(s) : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Title III hazard classification : Acute Health Hazard: Yes  
Chronic Health Hazard: No  
Fire: No  
Reactivity/Physical hazard: No  
Pressure: No

EPA Reg. No. : 352-638  
In the United States this product is regulated by the US Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

**SECTION 16. OTHER INFORMATION**

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® Registered trademark of E.I. du Pont de Nemours and Company

Revision Date : 09/25/2015

Contact person : DuPont Crop Protection, Wilmington, DE, 19898, Phone: 1-888-638-7668

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.

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