



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont  
Material Safety Data Sheet

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"DuPont" "STEWARD" EC INSECTICIDE  
M0000591 Revised 27-JUL-2005  
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CHEMICAL PRODUCT/COMPANY IDENTIFICATION  
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Material Identification

"STEWARD" is a registered trademark of DuPont.

"DuPont" is a trademark of DuPont.

CAS Number : 173584-44-6  
CAS Name : (DPX-KN128 Active Ingredient)

# Tradenames and Synonyms

DPX-KN128 Active Ingredient  
Indoxacarb 150 EC Insecticide  
Steward EC Insecticide (USA, Australia)  
Steward 150 EC Insecticide (Pakistan)  
Avaunt 150 EC Insecticide (India, Iran, West Africa)  
Avaunt 150 EC Insecticide (Egypt, Morocco)  
Indoxacarb

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont  
1007 Market Street  
Wilmington, DE 19898

PHONE NUMBERS

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

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COMPOSITION/INFORMATION ON INGREDIENTS  
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Components

Material	CAS Number	%
INDOXACARB	173584-44-6	15.84
INERT INGREDIENTS		84.16

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HAZARDS IDENTIFICATION  
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## Emergency Overview

Caution! Harmful if swallowed. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Harmful if inhaled. Avoid breathing (dust, vapor or spray mist). Remove contaminated clothing and wash clothing before reuse.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

## Potential Health Effects

Based on data from animal testing, Steward EC may cause eye irritation with tearing, pain or blurred vision.

Based on data from animal testing, Steward EC may cause skin irritation with discomfort or rash.

Based on data from animal testing, ingestion of large amounts of the active ingredient, DuPont Indoxacarb Technical, may cause alterations in blood cell counts and/or anemia, and may produce neurological symptoms.

## Carcinogenicity Information

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

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FIRST AID MEASURES  
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## First Aid

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF IN EYES: 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.

IF ON SKIN OR CLOTHING: Remove contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

## (FIRST AID MEASURES - Continued)

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

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FIRE FIGHTING MEASURES  
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## Flammable Properties

Flash Point : 69°C  
Explosibility : Not explosive by impact. Thermally stable.

## Extinguishing Media

Water, Water Spray, Foam, Dry Chemical, CO2.

## Fire Fighting Instructions

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Runoff from fire control may be a pollution hazard.

If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

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ACCIDENTAL RELEASE MEASURES  
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## Safeguards (Personnel)

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

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus.

Emergency Response - Chemical resistant coveralls, waterproof gloves, waterproof boots and face/eye protection. If dusting occurs, use NIOSH approved respirator protection.

## (ACCIDENTAL RELEASE MEASURES - Continued)

## Initial Containment

Follow applicable Federal, State/Provincial and Local laws/regulations. Prevent material from entering sewers, waterways, or low areas.

## Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material. Dispose of in an approved container.

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HANDLING AND STORAGE  
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## Handling (Personnel)

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

## Storage

Do not subject to temperatures below 32°F. Store product in original container only in a location inaccessible to children and pets. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Not for use or storage in or around the home.

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EXPOSURE CONTROLS/PERSONAL PROTECTION  
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## Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

## Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options follow the instructions for Category A on the EPA chemical-resistance category selection chart.

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) are equal to or greater than 14 mils.

Shoes plus socks.

## (EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

Follow manufacturer instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash Personal Protective Equipment (PPE) separately from other laundry.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, wear:

Coveralls over long sleeved shirt and long pants.

Socks plus chemical-resistant footwear.

Chemical-Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all equal to or greater than 14 mils.

## Exposure Guidelines

## Exposure Limits

"DuPont" "STEWARD" EC INSECTICIDE

PEL (OSHA)	:	Particulates (Not Otherwise Regulated)
		15 mg/m <sup>3</sup> , 8 Hr. TWA, total dust
		5 mg/m <sup>3</sup> , 8 Hr. TWA, respirable dust
AEL * (DuPont)	:	1 mg/m <sup>3</sup>
		8 & 12 Hr. TWA, Respirable

\* 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.

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PHYSICAL AND CHEMICAL PROPERTIES  
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## Physical Data

Odor	:	Faint burn smell
Form	:	Liquid
Color	:	Light Amber
Density	:	0.947 g/mL (20°C)
pH	:	6.6 (1% solution in water)
Viscosity	:	5.6 cps @ 25°C at 60 rpm

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STABILITY AND REACTIVITY  
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## Incompatibility with Other Materials

None reasonably foreseeable.

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TOXICOLOGICAL INFORMATION  
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## Animal Data

## Steward EC

Oral LD50: 977 mg/kg, female rats (Slight toxicity)  
Dermal LD50: > 5000 mg/kg in rats  
(Slight to very low toxicity)  
Inhalation 4 hour LC50: > 5.2 mg/L in rats  
(Very low toxicity)

Steward EC is a slight skin and a slight eye irritant, but is not a skin sensitizer in animals.

Steward EC in high single oral doses caused wet or ruffled fur, leaning, prostrate or abnormal posture, ataxia, oral or ocular discharge, hair loss, lung noise, and hyperreactivity. Repeated oral dosing with DPX-JW062 (containing 99.7% DPX-KN128) caused hemolytic anemia and reduced body weight gain in male and female rats; other hematological and histopathological effects were considered to be secondary to test-substance induced hemolysis. The NOEL was 50 ppm for male rats and 20 ppm for female rats.

Based on animal data from DPX-JW062 (containing 50% Indoxacarb, active ingredient), DPX-KN128 is not considered a carcinogenic or reproductive hazard. Tests have shown that DPX-KN128 does not cause genetic damage in bacterial or mammalian cell cultures or in animals.

Animal data from DPX-KN128 show developmental effects only at exposure levels producing other toxic effects in the adult animal. The maternal and developmental NOEL was 2.0 mg/kg.

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ECOLOGICAL INFORMATION  
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## Ecotoxicological Information

## AQUATIC TOXICITY:

96 hour LC50 - Rainbow trout: 0.65 mg/L.  
Highly toxic.  
96 hour LC50 - Bluegill sunfish: 0.90 mg/L.  
Highly toxic.  
48 hour LC50 - Daphnia magna: 0.60 mg/L.  
Highly toxic.

## AVIAN TOXICITY:

Acute Oral LD50 - Bobwhite Quail: 98 mg/kg.  
Acute Dietary LC50 - Bobwhite Quail: 808 ppm.  
Acute Dietary LC50 - Mallard Duck: > 5620 ppm.

## AQUATIC TOXICITY:

No information is available.

## (ECOLOGICAL INFORMATION - Continued)

NOTE: The above Aquatic Toxicity and Avian Toxicity is for DPX-MP062 (containing 75% Indoxacarb, active ingredient).

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DISPOSAL CONSIDERATIONS  
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## Waste Disposal

Do not contaminate water, food, or feed by storage or 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.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to mammals, birds, fish, and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment rinsewater. Do not apply where/when conditions could favor run-off. Run-off from treated areas may be hazardous to aquatic organisms in neighboring areas.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

## Container Disposal

For Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Metal Containers (non-aerosol): Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

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TRANSPORTATION INFORMATION  
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## Shipping Information

DOT/IMO  
Proper Shipping Name : Environmentally Hazardous Substance,  
Liquid, N.O.S.  
(INDOXACARB)  
Hazard Class : 9  
UN No. : 3082  
Packing Group : III  
Marine Pollutant : Yes

NOTE: Not Regulated unless in bulk package or shipped by  
water.

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REGULATORY INFORMATION  
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## U.S. Federal Regulations

## TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes  
Chronic : No  
Fire : No  
Reactivity : No

In the United States this product is regulated by the US  
Environmental Protection Agency under the Federal Insecticide,  
Fungicide and Rodenticide Act. It is a violation of federal law  
to use this product in a manner inconsistent with its labeling.

EPA Reg. No. 352-XXX

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OTHER INFORMATION  
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The data in this Material Safety Data Sheet relates only to the  
specific material designated herein and does not relate to use in  
combination with any other material or in any process.

Responsibility for MSDS: DuPont Crop Protection  
Address : Wilmington, DE 19898  
Telephone : 1-888-638-7668

# Indicates updated section.

This information is based upon technical information believed to be  
reliable. It is subject to revision as additional knowledge and  
experience is gained.

End of MSDS