



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

Page 1

"DuPont" "ASANA" XL INSECTICIDE
M0000191 Revised 5-MAR-2008

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"Asana" is a registered trademark of DuPont.

"DuPont" is a trademark of DuPont.

Corporate MSDS Number : DU002101

Tradenames and Synonyms

DPX-YB656
B10117640

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)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
ESFENVALERATE	66230-04-4	8.4
(S)-Cyano(3-Phenoxyphenyl)Methyl(S)-4-Chloro-alpha-(1-Methylethyl)benzeneacetate		
INERT INGREDIENTS		91.6
(INCLUDES PERCENTAGES OF THE FOLLOWING:)		
Aromatic Hydrocarbon	64742-95-6	12
* Ethylbenzene	100-41-4	<1

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Components (Remarks)

Contains Xylene range aromatic solvent

HAZARDS IDENTIFICATION

Emergency Overview

WARNING! May be fatal if swallowed. Harmful if inhaled. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. For medical emergencies involving this product, call toll free 1-800-441-3637.

Potential Health Effects

Skin contact with Esfenvalerate may cause a transient (several minutes up to approximately 24 hours) persistent burning or prickling sensation. Animal data suggests that at high doses, Esfenvalerate may be absorbed through the skin in amounts capable of causing toxic effects.

Eye contact with Esfenvalerate may cause eye irritation with discomfort, tearing, or blurring of vision.

Ingestion of Esfenvalerate may cause nonspecific discomfort, such as nausea, vomiting, headache, or weakness; temporary nervous system effects such as muscular weakness, tremors and incoordination.

Significant exposure to vapor is not anticipated. However, the compound may be harmful if inhaled and may produce acute transient nervous system effects at high doses.

Carcinogenicity Information

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

Material	IARC	NTP	OSHA	ACGIH
Ethylbenzene	2B			A3

FIRST AID MEASURES

First Aid

IF SWALLOWED: Call poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. 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 INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial

(FIRST AID MEASURES - Continued)

respiration, preferably by mouth-to mouth, if possible. Call a poison control center or doctor for further treatment advice.

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: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. 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.

Notes to Physicians

If on skin, after drying apply vitamin E cream or oil if available. If not available, apply vegetable oil liberally over painful areas. The oil or cream may be used repeatedly until relief is achieved.

Contains xylene range aromatic solvent - vomiting may cause aspiration pneumonia.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : 66 C (151 F)
Method : TCC

Combustible. Heating can release vapors which can be ignited.

Hazardous gases/vapors produced in fire are toxic and may include hydrogen cyanide.

Extinguishing Media

Water Spray, Water Fog, Dry Chemical, CO2.

Fire Fighting Instructions

Evacuate personnel to a safe area. Wear self-contained breathing apparatus. Wear full protective equipment. Use water spray. Cool tank/container with water spray.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

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

Spill Clean Up

In case of spill or leak, soak up with sand, earth or synthetic absorbent (do not use alkaline absorbents) and dispose of wastes in compliance with local, State and Federal regulations.

Accidental Release Measures

CAUTION - COMBUSTIBLE!

LARGE SPILLS: Eliminate potential source of ignition. Wear appropriate respirator and other protective clothing. Shut off source of leak only if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material; place in non-leaking containers and seal tightly for proper disposal. Flush area with water to remove trace residue; dispose of flush solution as above.

SMALL SPILLS: Take up with absorbant material and place in non-leaking containers for proper disposal. Do not use alkaline absorbant.

HANDLING AND STORAGE

Handling (Personnel)

Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Wash clothing after use. Discard shoes if contaminated. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

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.

(HANDLING AND STORAGE - Continued)

Storage

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

Store in a secure, dry and temperate area. Store in original container. Keep container closed when not in use. Do not store near food or feed. Do not use or store around the home. Avoid contact with water. In case of spill or leak, soak up with sand, earth or synthetic absorbent (do not use alkaline absorbents) and dispose of wastes in compliance with local, State and Federal regulations.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

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 part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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 E on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as Barrier Laminate or Neoprene Rubber or Nitrile Rubber or Viton.
- Shoes plus socks.
- Protective eyewear.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash 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, is:

- Coveralls.
- Chemical-resistant gloves, such as Barrier Laminate or Neoprene Rubber or Nitrile Rubber or Viton.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

- Shoes plus socks.
- Protective eyewear.

Exposure Guidelines

Applicable Exposure Limits

ESFENVALERATE

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 2 mg/m³, 8 & 12 Hr. TWA, Skin

Aromatic Hydrocarbon

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 50 ppm, 8 Hr. TWA

Ethylbenzene

PEL (OSHA) : 100 ppm, 435 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 100 ppm, 8 Hr. TWA, A3
STEL 125 ppm
AEL * (DuPont) : 25 ppm, 8 & 12 Hr. TWA

* 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.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

pH : 5.14
1%V emulsion in Type 1 reagent water
Odor : Oily/aromatic
Form : Liquid
Color : Straw to light amber
Density : 7.9 lb/gal @ 20 deg C (68 deg F)

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Conditions to Avoid

Avoid heat, flame and contact with strong oxidizing agents.

Decomposition

Hydrogen cyanide may be formed by thermal decomposition or reaction with alkaline materials.

(STABILITY AND REACTIVITY - Continued)

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Asana XL

Oral LD50:	458 mg/kg in male rats (Moderately toxic)
Dermal LD50:	> 2000 mg/kg in rabbits (Moderately toxic)
Inhalation 4 hour LC50:	2.93 mg/L in rats (Moderately toxic)

Asana XL is a slight eye irritant, but is not a skin irritant or skin sensitizer in animal tests.

ESFENVALERATE

Effects of single high dose dermal exposure include ataxia, tremors, constricted pupils and hind limb incoordination. constricted pupils and hind limb incoordination. Skin contact with small amounts caused a transient burning sensation in animals.

Effects of a single oral dose near the LD50 resulted in splayed limbs or gait, tremors, ataxia, convulsions, and/or hind limb incoordination. Repeated oral doses caused excessive grooming and neurological changes such as limb incoordination, unsteady gait, tremors, convulsions, and nonspecific effects such as weight loss.

Tests in animals demonstrate no carcinogenic or developmental toxicity. Reproductive toxicity has not been observed at doses below those causing maternal toxicity.

Tests have shown that Esfenvalerate does not cause genetic damage in bacterial or mammalian cell cultures. It does not produce heritable genetic damage.

ECOLOGICAL INFORMATION

Ecotoxicological Information

ESFENVALERATE

AQUATIC TOXICITY:

96 hour LC50 - Bluegill sunfish: 0.23 ug/L.
96 hour LC50 - Rainbow trout: 0.07 ug/L.
96 hour LC50 - Fathead minnows: 0.18 ug/L.

AVIAN TOXICITY:

(ECOLOGICAL INFORMATION - Continued)

8 day dietary LC50 (Mallard Duck): 5274 ppm
8 day dietary LC50 (Bobwhite Quail): > 5620 ppm
LD50 (Bobwhite Quail, single dose): 381 mg/L

DISPOSAL CONSIDERATIONS

Waste Disposal

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

Pesticide wastes are toxic. 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 extremely toxic to fish and aquatic invertebrates. 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 apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or when disposing of equipment washwaters.

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

Container Disposal

Triple rinse (or equivalent), then offer for recycling or reconditioning if container reuse is permitted. If container reuse is prohibited, puncture metal containers and dispose of in a sanitary landfill, or by other approved State and local procedures. Dispose of plastic containers in a sanitary landfill, or by incineration if allowed by State and local authorities. If burned, stay out of smoke.

Container Refilling and Disposal (For Containers up to 250 gal): Refer to the product label.

If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product.

Container Disposal for Bulk Containers: Refer to the product label.

The container must only be refilled with this pesticide

(DISPOSAL CONSIDERATIONS - Continued)

product. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.
Do not transport if the container is damaged or leaking.
Disposal of the container must be in compliance with state
and local regulations.

For minor spills, leaks, etc., follow all precautions
indicated on this label and clean up immediately. Take
special care to avoid contamination of equipment and
facilities during cleanup procedures and disposal of
wastes. In the event of a major spill, fire or other
emergency, call 1-800-441-3637 day or night.

TRANSPORTATION INFORMATION

Shipping Information

DOT

Proper Shipping Name : Pesticides, Liquid, Toxic, N.O.S.,
(Esfenvalerate)
Hazard Class : 6.1
I.D. No. (UN/NA) : UN 2902
Packing Group : III
Marine Pollutant : (Water or Bulk)
Reportable quantity : Xylene (if 100 or more lbs. in a single
packaging)

Shipping Information: (Classification in effect after
March 6, 2008 - see 49CFR, 171.14(g))

DOT

Not regulated by D.O.T (49CFR) in non-bulk package.
If in a bulk package; describe as follows:

UN/NA Number : NA 1993
Proper Shipping Name : Combustible liquid, n.o.s.
(Xylene, Esfenvalerate)
Hazard Class/Division : Combustible Liquid
Packing Group : III
Reportable Quantity : Xylene (If 100 or more lbs.
Xylene in a single packaging)
Marine Pollutant : Bulk Package (Esfenvalerate)

IMO/IMDG

UN/NA Number : UN 3082
Proper Shipping Name : Environmentally hazardous
substances, liquid, n.o.s.
(Esfenvalerate)
Hazard Class/Division : 9
Packing Group : III
Marine Pollutant : Yes

IATA/ICAO: Not Regulated by IATA/ICAO

REGULATORY INFORMATION

U.S. Federal Regulations

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

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

EPA Reg No. 352-515.

This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating
Health : 1
Flammability : 2
Reactivity : 0

NPCA-HMIS Rating
Health : 2
Flammability : 2
Reactivity : 0

Personal Protection rating to be supplied by user depending on use conditions.

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
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