

**DuPont™ Asana® XL Insecticide**

Version 2.0

Revision Date 06/29/2015

Ref. 130000027415

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™ Asana® XL Insecticide  
Tradename/Synonym : DPX-YB656  
B10117640  
Esfenvalerate: (S)-cyano (3-phenoxyphenyl) methyl(S)-4-chloro-alpha-(1-methylethyl)benzeneacetate

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
Acute toxicity (Inhalation)	Category 4
Specific target organ toxicity - single exposure	Category 2
Specific target organ toxicity - repeated exposure	Category 2
Aspiration hazard	Category 1

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**Label content**

Pictogram

:



Signal word

: Danger

Hazardous warnings

: Combustible liquid.  
 Harmful if swallowed or if inhaled  
 May be fatal if swallowed and enters airways.  
 May cause damage to organs.  
 May cause damage to organs through prolonged or repeated exposure.

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.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/ eye protection/ face protection.  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.  
 Get medical advice/ attention if you feel unwell.  
 Rinse mouth.  
 Do NOT induce vomiting.  
 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.

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**Other hazards**

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 98.2 %

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

Component	CAS-No.	Concentration
Esfenvalerate	66230-04-4	8.4 %
Other Ingredients		91.6 %

Includes percentages of the following:

Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	64742-95-6	12 %
1,2,4-Trimethylbenzene	95-63-6	3.8 %
Cumene	98-82-8	0.1 %

**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.


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- 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. Do not give any liquid to the person. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Do not 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 : Vomiting may cause aspiration pneumonia. Dry skin and apply a vitamin E cream or oil containing a minimum of 15% vitamin E. If vitamin E cream or oil is not available, apply corn or vegetable oil liberally over any painful area of skin.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray, Dry chemical, Foam, Carbon dioxide (CO<sub>2</sub>)
- Unsuitable extinguishing media : High volume water jet, (contamination risk)
- Specific hazards : Hazardous combustion products: Hydrogen cyanide (hydrocyanic acid)
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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Further information : Evacuate personnel to safe areas. 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. Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**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) : Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Use personal protective equipment.

Environmental precautions : Prevent material from entering sewers, waterways, or low areas.

Spill Cleanup : In case of spill or leak, soak up with sand, earth or synthetic absorbent and dispose of wastes in compliance with local, State and Federal regulations. Do not use alkaline absorbent. Large spills should be collected mechanically (remove by pumping) for disposal. All flushing and clean-up residuals should be collected for proper disposal to prevent soil and surface, ground and sewer water contamination.

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) : Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. 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. Remove personal protective equipment immediately after handling this product. Wash thoroughly and put on clean clothing. Wash the outside of gloves before removing.

Handling (Physical Aspects) : Combustible  
Heating can release vapours which can be ignited.

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- Dust explosion class : No applicable data available.
- Storage : Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in original container. Store in a secure, dry and temperate area. Keep container closed when not in use. Do not allow material to become wet during storage. Do not store in or around the home. Keep out of the reach of children.
- Storage period : No applicable data available.
- Storage temperature : No applicable data available.

**SECTION 8. 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 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.
- Personal protective equipment
- Skin and body protection : Applicators and other handlers must wear:  
Long sleeved shirt and long pants  
Chemical resistant gloves, such as barrier laminate or Viton Neoprene  
Shoes plus socks  
Protective eyewear  
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 Viton Neoprene  
Shoes plus socks  
Protective eyewear
- Protective measures : Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. 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

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Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified (< 0.1% benzene)  
AEL \* (DUPONT) 50 ppm 8 & 12 hr. TWA

1,2,4-Trimethylbenzene  
TLV (ACGIH) 25 ppm 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.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

## Appearance

Physical state : liquid  
Form : viscous liquid  
Color : light amber

Odor : oily, aromatic

Odor threshold : No applicable data available.

pH : 5.14

Melting point/range : No applicable data available.

Boiling point/boiling range : No applicable data available.

Flash point : 66 °C  
Tag closed cup

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.

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Vapour density	: No applicable data available.
Density	: 7.8 lb/gal at 20 °C (68 °F)
Specific gravity (Relative density)	: No applicable data available.
Water solubility	: No applicable data available.
Solubility(ies)	: 0.002 mg/l at 25 °C (77 °F) dispersible
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	: No applicable data available.

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No applicable data available.
Chemical stability	: Stable at normal temperatures and storage conditions.
Possibility of hazardous reactions	: Polymerization will not occur.
Conditions to avoid	: Keep away from open flames, hot surfaces and sources of ignition.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Hazardous thermal decomposition products:, Hydrogen cyanide (hydrocyanic acid), Decomposes by reaction with alkaline solutions.

**SECTION 11. TOXICOLOGICAL INFORMATION**

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Inhalation 4 h LC50 : 2.93 mg/l , Rat



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Dermal LD50	:	> 2,000 mg/kg , Rabbit
Oral LD50	:	458 mg/kg , male, Rat
Skin irritation	:	No skin irritation, Rabbit
Eye irritation	:	slight irritation, Rabbit
Sensitisation	:	Did not cause sensitisation on laboratory animals., Guinea pig

## Esfenvalerate

Carcinogenicity	:	Not classifiable as a human carcinogen. Animal testing did not show any carcinogenic effects.
Mutagenicity	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Reproductive toxicity	:	No toxicity to reproduction Animal testing showed no reproductive toxicity.
Teratogenicity	:	Animal testing showed no developmental toxicity.

## Solvent naphtha (petroleum), light arom. (&lt;0.1% Benzene)

Repeated dose toxicity	:	Skin contact Rat - 28 d NOAEL: 3,750 mg/kg No toxicologically significant effects were found., Information given is based on data obtained from similar substances.
		Inhalation Rat - 90 dMethod: OECD Test Guideline 412 No toxicologically significant effects were found.
Carcinogenicity	:	Not classifiable as a human carcinogen. Animal testing did not show any carcinogenic effects. Information given is based on data obtained from similar substances.
Mutagenicity	:	Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Information given is based on data obtained from similar substances.


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Reproductive toxicity : No toxicity to reproduction  
 Animal testing showed no reproductive toxicity.  
 No effects on or via lactation  
 Information given is based on data obtained from similar substances.

Teratogenicity : Animal testing showed no developmental 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).

Material	IARC	NTP	OSHA
Cumene	2B	X	

**SECTION 12. ECOLOGICAL INFORMATION**
**Aquatic Toxicity**

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96 h LC50 : Oncorhynchus mykiss (rainbow trout) 0.0048 mg/l

48 h EC50 : Desmodesmus subspicatus (green algae) 0.0215 mg/l

48 h EC50 : Daphnia magna (Water flea) 0.025 mg/l

**Esfenvalerate**

21 d : NOEC Pimephales promelas (fathead minnow) 0.231 ug/L

21 d : NOEC Daphnia magna (Water flea) 0.052 ug/L

**Solvent naphtha (petroleum), light arom. (<0.1% Benzene)**

21 d : NOEC Daphnia magna (Water flea) 2.6 mg/l OECD Test Guideline 211

Information given is based on data obtained from similar substances.

**Environmental Fate**


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Solvent naphtha (petroleum), light arom. (&lt;0.1% Benzene)

Biodegradability : Biodegradable OECD Test Guideline 301  
Information given is based on data obtained from similar substances.

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 apply where/when conditions favour runoff. 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. Very toxic to bees. Do not apply this product or allow it to drift to blooming crops 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.

Waste disposal methods - Container : Container Refilling and Disposal:  
Refer to the product label for instructions.  
Do not transport if this container is damaged or leaking.

In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

Contaminated packaging : No applicable data available.

**SECTION 14. TRANSPORT INFORMATION**

DOT : 1993

NA Number : 1993

Proper shipping name : Combustible liquid, n.o.s. (Xylene)

Class : CBL

Packing group : III

Labelling No. : NONE


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

Not regulated in quantities less than 119 gallons (450 litres) in one container.

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

**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:

**WARNING!**

May be fatal if swallowed. Harmful if inhaled. Do not get in eyes, on skin, or on clothing. Avoid breathing vapours or mist. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before re-use. This product is highly toxic to: Bees This product is extremely toxic to: Fish Aquatic invertebrates


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SARA 313 Regulated Chemical(s)	: 1,2,4-Trimethylbenzene
PA Right to Know Regulated Chemical(s)	: Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Cottonseed Oil, 1,2,4-Trimethylbenzene
Title III hazard classification	: Acute Health Hazard: Yes Chronic Health Hazard: Yes Fire: Yes Reactivity/Physical hazard: Yes Pressure: Yes
EPA Reg. No.	: 352-515 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.
California Prop. 65	: WARNING! This product contains a chemical or chemicals known to the State of California to cause cancer. WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**SECTION 16. OTHER INFORMATION**

	NFPA
Health	1
Flammability	2
Reactivity/Physical hazard	0

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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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