Date Issued: May, 2003
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MATERIAL SAFETY DATA SHEET
ENSTAR II

Manufacturer: Wellmark International

Address: 1100 East Woodfield Road, Suite 500 Schaumburg, IL 60173

Emergency Phone: 1-800-248-7763

Transportation Emergency Phone: CHEMTREC: 1-800-424-9300

1 CHEMICAL PRODUCT INFORMATION

Product Name: Enstar II

Chemical Name/Synonym: S-Kinoprene

Chemical Family: 2-propynyl (2E,4E)-(7S)-3,7,11-trimethyl-2,4-dodecadienoate

Formula: C18 H28 O2

EPA Registration No.: 2724-476

RF Number:

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component (chemical, common name)	CAS Number	Weight	Tolerance
S-Kinoprene Technical: 2-propnyl-(2E,4E)-(7S)-3,7,11-trimethyl –2-4-dodecadienoate	65733-20-2	65.1%	Not established
Inert ingredients (nonhazardous and/or trade secret):		34.9%	Not established
Mixed Xylenes (C9 Aromatics)			ACGIH: 100 ppm (vapor)

PRECAUTIONARY STATEMENT

KEEP OUT OF THE REACH OF CHILDREN

WARNING: Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin, or clothing. Harmful if inhaled, avoid breathing spray mist. May also causes skin sensitization reactions in certain individuals. Wash thoroughly with soap and water after handling.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Possible skin irritation, skin sensitization in sensitive individuals. Possible temporary eye irritation.

PRIMARY ROUTE OF ENTRY **Dermal/Eye:** No **Oral:** Yes **Inhalation:** Yes

ACUTE TOXICITY

Oral: LD50 (rat): 1,649 mg/kg

Dermal: LD50 (rabbit): >2,000 mg/kg (highest dose level tested)

Inhalation: LC50 (rat): >4.6 mg/l (4 hr.) (highest dose level tested)

OTHER TOXICOLOGICAL INFORMATION

Skin Irritation: Moderately irritating (rabbit)

Eye Irritation: Moderately irritating (rabbit)

Sensitizer: Positive reaction, skin (guinea pig)

4. FIRST AID MEASURES

Eye: Hold eyes 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 eyes.

Skin: Take off contaminated clothing. Wash skin immediately with soap and water for 15-20 minutes. Call a poison control center or doctor immediately for treatment advice

Ingestion: Do not induce vomiting or give anything by mouth to an unconscious person. . Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. Get medical attention and have material removed by gastric lavage (contains hydrocarbon solvent)

Inhalation: Remove person to clear air area. If person is not breathing call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth, if possible

Note to Physician: If ingested, do not induce vomiting. May present aspiration hazard.

5. FIRE FIGHTING MEASURES

NFPA Rating: **Health: 2** **Fire: 2** **Reactivity: 0**

Flammability Class: Combustible liquid

Flash Point: 108F (Pensky-Martin)

Explosive Limits (% of Volume): Lower: N/A, Upper: N/A

Extinguishing Media: Water spray, foam, dry chemical, CO2

Special Protective Equipment: Firefighters should wear full protective clothing and self contained breathing apparatus.

Fire Fighting Procedures: Normal procedures. Do not allow fire fighting water to escape into waterways or sewers.

Combustion Products: Carbon dioxide, water

Unusual Fire/Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken: Soak up spilled material with absorbents. Scoop into a container for disposal.

Absorbents: Cat litter, sawdust, dirt or equivalent.

Incompatibles: Strong oxidizers

7. HANDLING AND STORAGE

Handling: 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: Store in a cool, dry area away from food or water..

8. EXPOSURE CONTROL / PERSONAL MEASURES

Exposure Limits:	Not established
Ventilation:	Provide mechanical ventilation in storage area
Personal Protective Equipment:	Applicators and handlers must wear long-sleeved shirt and long pants, chemical-resistant gloves, shoes plus socks and protective eyewear.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Amber liquid, faint fruity odor.
Boiling Point:	138C (280F
Melting Point:	N/A
Vapor Pressure (mm Hg):	Less than 1 mm Hg (20C)
Vapor Density (Air = 1):	N/A
Specific Gravity:	0.92 (20C)
Bulk Density:	Not determined
Solubility:	Disperses in water
Evaporation Rate:	Less than Butyl Acetate
pH:	6.8

10 STABILITY AND REACTIVITY

Stability:	Stable
Reactivity:	Non reactive
Incompatibility w/ Other Materials:	Strong oxidizers
Decomposition Products:	N/A
Hazardous Polymerization:	Will not occur

11 TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY [Specific to Active Ingredient(s)]
In 90-day feeding studies, the no-observed effect level (NOEL) was 1000 ppm in rats and 900 ppm in dogs. The target organ was identified as the liver in rats at 5000 ppm, where both decreased body weight gains, liver enlargement and liver pathology were seen.

DEVELOPMENTAL/REPRODUCTIVE TOXICITY [Specific to Active Ingredient(s)]
No adverse maternal or developmental effects were seen in rats at 75 mg/kg/day; both maternal deaths and fetal toxicity were seen at higher levels.

MUTAGENICITY [Specific to Active Ingredient(s)]
Not mutagenic when tested in either bacterial or mammalian cells.

OTHER
In hormone screening bioassays conducted in mammalian endocrine systems; no estrogenic activity, androgenic and anabolic activity, or glucocorticoid activity were identified. * Reclassification of technical kinoprene and its formulated product (Enstar) as biorational pesticides subjected these pesticides to fewer testing requirements than those for chemical pesticides (FIFRA subdivision M requirements).
U.S. EPA has evaluated this product's toxicity as part of the U.S. registration process. EPA requires extensive toxicity tests be performed before any crop protection chemical is approved for use. Based on their review of test results, they have determined that no significant risk to users, the public, or the environment exists when this product is used as indicated on the product label.

12 ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE [Active Ingredients Only]

Hydrolysis: Slow hydrolysis

Photolysis: Rapid photodegradation

Soil half life: Short (t-1/2 not determined

Water solubility: Disperses in water

ECOTOXICITY [Active Ingredients Only]

Acute Toxicity: Fish: LC50 (Trout): 20 mg/liter (ppm) (96 hour test)
Aquatic Invertebrates: LC50(daphnia): 0.113 mg/ liter (ppm) (48 hours)

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food, or feed by disposal. **Pesticide Disposal** –Wasts resulting from use of this product may be disposed of on site or at an approved waste disposal facility. **[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.

14. TRANSPORT INFORMATION

DOT49CFR Description: Not regulated via highway in less than 119 gallons/container; >119 gallons/container: Combustible Liquid N.O.S. (Trimethylbenzenes); NA 1993 PG III

Freight Classification: Insecticides other than poison. NMFC Item 102120 Class 60

15. REGULATORY INFORMATION

CERCLA (Superfund): Reportable Quantity (RQ) - Xylene (mixed) = 100 lbs.

RCRA: Regulated due to ignitability

SARA 311/312 HAZARD CATEGORIES

Immediate Health: Yes (irritant)

Delayed Health: No

Fire: Yes

Sudden Pressure: No

Reactivity: No

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.