

# HARPOON®

## MATERIAL SAFETY DATA SHEET

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Florida Silvics, Inc. (dba Tree Tech Microinjection Systems)  
950 SE 215th Ave.  
Morriston, Florida 32668  
**In case of emergency, call 1-800-622-2831**  
**or Chemtrec 1-800-424-9300**

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### I. MATERIAL IDENTIFICATION

Product Name: **HARPOON**                      **EPA Registration No. 64014-9**  
Contains Metasystox-R® insecticide (3 mL) per microinjection unit  
Chemical Name:        Oxydemeton-methyl  
Synonym (Pesticide): Metasystox-R    Formula: 7C H13 6O P  
T.S.C.A. Status:        Registered under FIFRA  
EPA Signal Word:      Restricted Use - Harmful if inhaled, swallowed or absorbed  
through skin. Suspect cancer hazard. Contains material which may cause cancer.

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### II. INGREDIENTS

Material:

Oxydemeton-methyl	50.0%	CAS No. 301-12-2
OSHA hazard: N		
Other ingredients (trade secret)	50.0%	CAS No. 108-10-1
OSHA hazard: N		

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### III. FIRST AID PROCEDURES

If poisoning is suspected, immediately contact a physician, the nearest hospital, or the nearest Poison Control center. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

**Ingestion:** Call a physician or Poison Control center immediately. If medical assistance cannot be given immediately, induce vomiting by touching back of throat with a finger, or by giving one dose (1/2 oz. or 15 mL) of syrup of ipecac. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth to an unconscious person. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.

**Eye Contact:** Hold eyelids open and flush eyes with a steady, gentle stream of water for at least 15 minutes. Seek medical attention.

**Skin Contact:** In case of contact, immediately wash with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation develops or persists.

**Inhalation:** Remove victim from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer oxygen, if available. If victim is not breathing, administer artificial respiration, preferably mouth-to-mouth. Seek medical attention. Medical conditions aggravated by exposure: No specific medical conditions are known which may be aggravated by exposure to the active ingredient in this product; however, any disease, medication, or prior exposure which reduces normal cholinesterase activity may increase susceptibility to the toxic effects of the active ingredient. In addition, certain pre-existing skin, liver, and kidney disorders may be aggravated by exposure to this product due to solvent components.

**IN ALL CASES OF SUSPECTED POISONING, GET MEDICAL ATTENTION IMMEDIATELY.**

**ANTIDOTE:** Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. 2-PAM is also antidotal and may be administered in conjunction with atropine. Compound inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves. Do not give morphine. Watch for pulmonary edema which may develop in serious cases of poisoning even after 24-48 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

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#### **IV. HEALTH HAZARD INFORMATION**

Primary route(s) of entry: Dermal absorption and inhalation are the primary routes of entry. This product can be absorbed through the skin. Symptoms of overexposure: Acute exposure: Inhalation, dermal absorption or ingestion of this material may result in systemic intoxication due to inhibition of the enzyme cholinesterase. The sequence of development of systemic effects varies with the route of entry, and the onset of symptoms may be delayed up to 12 hours. First symptoms of poisoning may be nausea, increased salivation, lachrymation, blurred vision and constricted pupils. Other symptoms of systemic poisoning include vomiting, diarrhea, abdominal cramping, dizziness and sweating. After inhalation, respiratory symptoms including tightness of chest, wheezing, and laryngeal spasms may be pronounced at first. If the poisoning is severe, then symptoms of weakness, muscle twitching, confusion, ataxia, slurred speech, convulsions, low blood pressure, cardiac irregularities, loss of reflexes and coma may occur. In extreme cases, death may occur due to a combination of factors such as respiratory arrest, paralysis of respiratory muscles or intense bronchoconstriction. Complete symptomatic recovery from sublethal poisoning usually occurs within one week once the source of exposure is removed completely. The aromatic hydrocarbon solvents in this product can be irritating to the eyes, nose and throat. In high concentration, they may cause central nervous system depression and narcosis characterized by nausea, lightheadedness and dizziness from overexposure by inhalation.

Chronic Exposure: Cholinesterase inhibition sometimes persists for 2-6 weeks; thus, repeated exposure to small amounts of Metasystox-R may result in an unexpected cholinesterase depression causing symptoms such as malaise, weakness, and anorexia that resemble other illnesses such as influenza. Exposure to a concentration that would not have produced symptoms in a person that was not previously exposed may produce severe symptoms of cholinesterase inhibition in a previously exposed person. Repeated skin contact may result in defatting of the skin by the solvents in the product which can lead to redness and irritation of the skin. Chronic overexposure to these solvent components may cause mucous membrane irritation, nausea, headache, loss of appetite, weakness, and alcohol intolerance. A rat reproduction study revealed adverse effects on the testes and overall reproductive performance when high dosages were administered. The relevance of these findings for humans is unknown.

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## **V. STABILITY AND REACTIVITY**

Chemical Stability: Stable under normal handling and storage conditions.

Conditions to Avoid: Sustained temperatures above 104° F (400° C). Avoid exposure to strong oxidizing agents. Subject to hydrolysis. Unstable in alkaline media.

Materials to Avoid: Oxidizing agents.

Hazardous Decomposition Products: CO, P<sub>2</sub>O<sub>5</sub>, SO<sub>2</sub>

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## **VI. PHYSICAL HAZARD INFORMATION**

### Physical Properties

Boiling Point Range:	Not established
Specific Gravity:	1.03 @ 20° C (68° F)
Vapor Pressure:	2.8 X 10 <sup>-5</sup> mm Hg @ 20° C
Vapor Density:	Not established
Melting Point:	-100° C
Appearance:	Plastic microinjection unit containing amber liquid
Odor:	Sulfurous
State:	Liquid
Solubility in water:	Miscible
Density:	8.59 lbs/gal

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## **VII. ENVIRONMENTAL PROTECTION**

Waste Disposal Method: Chemical additions, processing or otherwise altering this material, may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material. Observe all federal, state and local disposal laws concerning health and environment.

Container Handling and Disposal: DO NOT RE-USE MICROINJECTION UNITS.

**In Case of Fire:** For small fires, use dry chemical or carbon dioxide extinguishing media. For large fires, use water spray, CO<sub>2</sub>, foam or dry chemical. Fire fighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Prevent human exposure to fire, smoke or fumes. Under fire conditions, toxic, corrosive fumes are emitted. Evacuate non-essential personnel from area. Fight fire from upwind position. Equipment or materials involved in pesticide fires may become contaminated. Use water spray to cool nearby containers and structures exposed to fire. If water is used as an extinguishing medium, the contaminated area must be diked to keep the contaminated water out of all water supplies. Observe all government regulations on spill reporting and handling disposal of waste.

**Unusual Fire and Explosion Hazards:** Toxic vapors such as oxides of sulfur and oxides of carbon may be formed

**Flash Point and Method:** 69°F (TCC), 78°F (TOC)

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## **VIII. PERSONAL PROTECTION AND PRECAUTIONS**

**Skin:** Wear long-sleeved clothing (i.e., shirts and pants), chemical-resistant gloves such as barrier laminate or butyl rubber or nitrile rubber or viton, chemical-resistant footwear plus socks, and chemical-resistant apron.

**Eye:** Avoid eye contact. Protective eye wear is required.

**Ventilation:** Maintain exposure levels below the applicable exposure limits through the use of general and local exhaust ventilation.

**Respiratory:** For exposure in enclosed areas, wear a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). For exposure outdoors, wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

**Other Protective Devices and Procedures:** Wear chemical-resistant gloves. Clean water should be available for washing in case of eye or skin contamination. Educate and train employees in safe use of the product. Follow all label instructions. Remove clothing immediately if pesticide gets inside. Then shower or wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. User should wash hands before consuming foods, beverages, or tobacco products or using the toilet. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instruction for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry

**Additional Protection Information:** Plasma and/or red blood cell cholinesterase activity can be used to detect excessive absorption of Metasystox-R. It is preferable to establish a pre-exposure baseline value for best comparisons. Metabolites may also be

detected in the blood or urine. If significant cholinesterase depression occurs, no further exposure should be allowed until cholinesterase values return to normal.

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**IX. CALIFORNIA ADDENDUM (PROPOSITION 65) SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986**

This following specific warnings are hereby given relative to substances that the State of California has identified as carcinogens and/or reproductive hazards under Proposition 65:

**WARNING: This product contains a chemical 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.**

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**IX. SARA TITLE III HAZARD CATEGORY:  
For Reporting Under Section 311 & 312**

Components present in this product that require reporting under the statute are: None

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**X. SPECIAL PRECAUTIONS AND STORAGE DATA**

Handling Precautions: Avoid direct or prolonged contact with skin and eyes. Do not breathe dusts. Do not breathe vapors and mists. Do not ingest. Wash thoroughly after handling.

Storing Precautions: Store in cool, well-ventilated, dry place. Do not store with feed or food. Do not place damaged. Store away from heat and open flame. Store out of reach of children. Do not store next to herbicides. Do not contaminate water, food or feed by storage or disposal.

Pesticide 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 of the nearest EPA Regional Office for guidance.

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**XI. SHIPPING DATA**

D.O.T. Shipping Name: Organophosphorous Pesticide, Liquid, Flammable, Toxic, N.O.S (Methyl Isobutyl Ketone, Oxydemeton-methyl), 3, UN 2784, PGII  
D.O.T. Hazard Classification: 3

UN/NA no.: UN 2784

Reportable Quantity (RQ): None

D.O.T. Placards: Flammable Liquid

D.O.T. labels required: Flammable Liquid, Poison

Freight Class Bulk: Insecticide, Agricultural, Liquid

Freight Class Pkg.: Insecticide, Agricultural, Liquid

Emergency Response Guide No.: 28

National Fire Protection Association (NFPA) Hazard Classification: Health - 3,4 4

Flammability - 4

Reactivity - 0

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## **XII. TOXICOLOGICAL INFORMATION**

Eye irritation: May cause irreversible eye damage.

Skin irritation: Harmful if absorbed through skin. Irritant. Causes redness, swelling.

Inhalation toxicity: Harmful if inhaled. May cause upper respiratory tract irritation.

Ingestion toxicity: Harmful if ingested.

Oral toxicity: LD<sub>50</sub> > 119 mg/kg, female rat.

Dermal toxicity: LD<sub>50</sub> > 844 mg/kg, male rabbit.

Chronic toxicity: This product contains ingredients that are considered by OSHA, NTP, IARC or ACGIH to be probable or suspected human carcinogens.

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. This information is furnished solely for your consideration, investigation and verification.

Before using any product READ THE LABEL.

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