

MATERIAL SAFETY DATA SHEET

Emergency Phone: 800-858-9300
Independent Agribusiness
Professionals, Inc.
Fresno, CA 93711

ERASER™ Insecticide*

Effective Date: 2/14/05

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: ERASER Insecticide

COMPANY IDENTIFICATION:

Independent Agribusiness Professionals
5756 N. Marks Ave.
Fresno, CA 93711

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Chlorpyrifos: O,O-Diethyl O-(3,5,6-Trichloro-2- Pyridinyl)Phosphorothioate	CAS# 002921-88-2	44.65%
Inert Ingredients, total, including:		55.35%
1,1,1-Trichloroethane	CAS# 000071-55-6	
Aromatic 100	CAS# 064742-95-6	
Xylene	CAS# 001330-20-7	
1,2,4-Trimethylbenzene	CAS# 000095-63-6	
Cumene	CAS# 000098-82-8	
Ethyltoluene	CAS# 025550-14-5	

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

3. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Hazardous Chemical. Hazardous Chemical. Red liquid with a solvent-type odor. May cause eye pain, irritation (which may be slow to heal), or slight corneal injury. Vapors may irritate eyes. May cause skin irritation. LD₅₀ for skin absorption in rabbits is >2000 mg/kg. Oral LD₅₀ for female rats is 272 mg/kg. The inhalation LC₅₀ for rats is >1-1.7 mg/L for 4 hours (males) and >4.65 mg/L for 1 hour (females). Cholinesterase inhibitor. Flash Point is >220°F (104°C) TCC and 205°F (96°C). Toxic to fish, wildlife, avian and aquatic organisms. Product contains a petroleum derivative solvent – will burn.

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POTENTIAL HEALTH EFFECTS: This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

EYE: May cause pain and moderate eye irritation which may be slow to heal. May cause slight corneal injury. Vapors may irritate eyes.

SKIN: Prolonged exposure may cause skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. The LD₅₀ for skin absorption in rabbits is >2000 mg/kg.

INGESTION: Single dose oral toxicity is moderate. The oral LD₅₀ for female rats is 272 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death. If aspirated (liquid enters the lung), may cause lung damage or even death due to chemical pneumonia.

INHALATION: Excessive exposure may produce organophosphate type cholinesterase inhibition. The LC₅₀ for male and female rats was >1-1.7mg/L for 4 hours and >4.65 mg/L for 1 hour. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). Excessive exposure to solvent may cause respiratory irritation and central nervous system depression. Signs and symptoms of central nervous system depression, in order of increasing exposure, are headache, dizziness, drowsiness, and incoordination.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:

Excessive exposure may produce organophosphate type cholinesterase inhibition. Signs and symptoms of excessive exposure to chlorpyrifos may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, and convulsions. Chlorpyrifos produced mild adrenal effects when fed to rats, but only at doses that greatly exceeded any exposures that would be received during use of this product. Solvent has been reported to cause liver, kidney and blood effects at high exposure levels. Xylene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations; such effects have not been reported in humans. For cumene, in animals, effects have been reported on the following organs: eyes (cataracts).

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CANCER INFORMATION: Chlorpyrifos did not cause cancer in animal studies.

TERATOLOGY (BIRTH DEFECTS): Chlorpyrifos did not cause birth defects in laboratory animals. Solvent was toxic to the fetus in laboratory animal tests, but only at doses that were toxic to the mothers. Very high concentrations of solvent (producing severe toxicity to adult animals) induced an increase in cleft palate in mice, which is a common developmental abnormality in mice and is associated with stress to the maternal animals. No malformations were induced at exposures less than those causing severe toxicity to the adult animals.

REPRODUCTIVE EFFECTS: Chlorpyrifos did not interfere with fertility in reproduction studies in laboratory animals. Some evidence of toxicity to the offspring occurred, but only at a dose high enough to produce significant toxicity to the parent animals. In a 3-generation reproduction study on the solvent, the only effects observed were at exposures that produced severe toxicity to the parent animals.

4. FIRST AID:

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash thoroughly with soap and water. Seek medical attention if irritation persists.

INGESTION: Do not induce vomiting. Contains aromatic petroleum solvent. Call a physician or poison control center immediately.

INHALATION: Remove to fresh air if effects occur. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration. Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs unless absolutely necessary. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES:

FLASH POINT: (1) >220°F, 104°C (2) 205°F, 96°C
METHOD USED: (1) TCC (2) TOC

FLAMMABLE LIMITS

LFL: Not applicable
UFL: Not applicable

EXTINGUISHING MEDIA: Foam, CO₂, dry chemical.

FIRE & EXPLOSION HAZARDS: Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases may be formed under fire conditions. Chlorpyrifos undergoes exothermic decomposition at approximately 266°F (130°C). Violent rupture of containers may occur at temperatures generated during a fire.

FIRE-FIGHTING EQUIPMENT: Use positive-pressure, self-contained breathing apparatus.

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6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: For small spills, absorb with material such as Hazorb, Zorbball, or dirt. Contain spills to keep out of sewers. Report large spills to Independent Agribusiness Professionals at 800-858-9300

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: See label for end-use directions. Keep out of reach of children. Do not swallow, get in eyes, on skin, or on clothing. Avoid breathing mist or vapors. Keep away from heat and open flame. Handle concentrate in ventilated area. Store in original container. Keep away from food, feedstuffs, and domestic water supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

EXPOSURE GUIDELINES:

Chlorpyrifos: ACGIH TLV and OSHA PEL are 0.2 mg/M³. Skin. ACGIH classification is A4.

Aromatic 100 (xylene range aromatic solvent): None established.

1,1,1-Trichloroethane: ACGIH TLV and OSHA PEL are 350 ppm TWA, 450 ppm, STEL. ACGIH classifies as A4.

Trimethylbenzene: ACGIH TLV and OSHA PEL are 25 ppm. Cumene (isopropyl benzene): ACGIH TLV and OSHA PEL are 50 ppm, Skin.

Xylene: ACGIH TLV and OSHA PEL are 100 ppm TWA, 150 ppm STEL. ACGIH classifies as A4.

Ethyltoluene: Dow AgroSciences Industrial Hygiene Guide is 10 ppm.

PELs are in accord with those recommended by OSHA, as in the 1989 revision of PELs.

ENGINEERING CONTROLS: Use only with adequate ventilation. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use a NIOSH approved air-purifying respirator.

SKIN PROTECTION: For brief contact, no precautions other than clean body-covering clothing should be needed. Use gloves impervious to this material when prolonged or frequently repeated contact could occur.

EYE/FACE PROTECTION: Use chemical goggles.

APPLICATORS AND ALL OTHER HANDLERS: Please refer to the product label for personal protective clothing and equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES:

BOILING POINT: 165°F, 74°C

VAPOR PRESSURE: Approximately 46 mmHg @ 20°C

VAPOR DENSITY: Not determined

SOLUBILITY IN WATER: Emulsifiable

SPECIFIC GRAVITY: 1.18 (68°/68°F)

APPEARANCE: Red liquid

ODOR: Solvent-type

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) Avoid heating above 50°C (122°F). Product undergoes exothermic decomposition at approximately 130°C (266°F) which can lead to higher temperatures and violent decomposition if heat generated is not removed. Contains petroleum derivative solvent - will burn.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Lorsban 4E may be inactivated by certain sulfur containing fertilizers. Consult Independent Agribusiness Professionals for specific information.

HAZARDOUS DECOMPOSITION PRODUCTS: Under fire conditions, hydrogen chloride, ethyl sulfide, diethyl sulfide and nitrogen oxides can be formed.

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HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

MUTAGENICITY: Results of in-vitro ('test tube') and animal mutagenicity tests on the aromatic solvent have been negative. Based on a majority of negative data and some equivocal or marginally positive results, chlorpyrifos is considered to have minimal mutagenic potential.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

Based on information for chlorpyrifos and components of Aromatic 100.
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

DEGRADATION & PERSISTENCE:

Based on information for chlorpyrifos.
The photolysis half-life in water is 3-4 weeks.
In the atmospheric environment, material is estimated to have a tropospheric half-life of 1.4 hours.
Degradation is expected in the soil environment within days to weeks.
Under aerobic soil conditions the half-life is generally 30 to 60 days.
Based on information for components of Aromatic 100.
Biodegradation under aerobic static laboratory conditions is high (BOD₂₀ or BOD₂₈/ThOD is >40%).

ECOTOXICOLOGY: Based on information for chlorpyrifos.
Material is very highly toxic to aquatic organisms on an acute basis (LC₅₀/EC₅₀ <0.1 mg/L in most sensitive species).
Material is highly toxic to birds on a dietary basis (LC₅₀ is between 50 and 500 ppm).
Material is moderately toxic to birds on an acute basis (LD₅₀ is between 51 and 500 mg/kg).
Based on information for Aromatic 100.
Material is moderately toxic to aquatic organisms on an acute basis (LC₅₀/EC₅₀ is between 1 and 10 mg/L in most sensitive species).

Material is practically non-toxic to birds on a dietary basis (LC₅₀ is >5000 ppm).
Material is practically non-toxic to birds on an acute basis (LD₅₀ is >2000 mg/kg).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: Do not contaminate food, feed, or water by storage or cleaning of equipment. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If wastes resulting from the use of this product cannot be disposed according to label instructions, dispose of these wastes at an approved facility. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA regional office for guidance.

14. TRANSPORT INFORMATION:

For DOT regulatory information, if required, consult transportation regulations, product shipping papers, or consult Independent Agribusiness Professionals.

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15. REGULATORY INFORMATION:

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
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1,1,1-Trichloroethane (Methyl chloroform)	000071-55-6	25.4%
1,2,4-Trimethylbenzene	000095-63-6	16%
Xylene (mixed isomers)	001330-20-7	1.5%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard
A delayed health hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>LIST</u>
1,1,1-Trichloroethane	000071-55-6	NJ2 NJ3 PA1 PA3
Chlorpyrifos	002921-88-2	NJ3 PA1 PA3
1,2,4-Trimethylbenzene	000095-63-6	NJ2 NJ3 PA1
Cumene	000098-82-8	NJ2 NJ3 PA1
Xylene	001330-20-7	NJ1 NJ2 NJ3 PA1

NJ1=New Jersey Special Health Hazard Substance (present at greater than or equal to 0.1%).

NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%).

NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

<u>Chemical Name</u>	<u>CAS NUMBER</u>	<u>RQ</u>	<u>% in Product</u>
Chlorpyrifos	002921-88-2	1	44.65%
1,1,1-Trichloroethane	000071-55-6	1000	25.4%
Xylene	001330-20-7	100	1.5%
Cumene	000098-82-8	5000	0.75%

16. OTHER INFORMATION:

MSDS STATUS: Reference: DR-0124-3443

The Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied, Is Made. Consult Independent Agribusiness Professionals For Further Information

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