

A scenic view of a forest stream with large rocks and lush green trees. The water flows over the rocks, creating small cascades. The background is filled with dense green foliage and tall trees.

Pesticide Safety through Label Interpretation

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EPA Proposes New Certification and Training Requirements for Certified Applicators

- <http://www2.epa.gov/pesticide-worker-safety/epa-proposes-stronger-standards-people-applying-riskiest-pesticides>
- 3-Year Recertification Cycle
 - Commercial: 6 CEU core + 6 CEU per category
 - Private: 6 CEU “core” + 3 CEU per category if applicable (soil & non-soil fumigation & aerial)
- Minimum age for RUPs will be 18


Pesticide Names

- **Chemical Name:** Active ingredient
Isopropyl (2E,4E,7S)-11-methoxy-3,7,11-trimethyl-2,4- dodecadienoate
- **Common Name:** Shorter name that EPA recognizes as a substitute for the chemical name of a product
(S)-Methoprene
- **Trade Name:** Brand or product name
Altosid, Apex, Diacon, Dianex, Kabat, Minex, Precor, etc.

Purchase Using Common Names

- Short version of the sometimes very long & complex chemical name set by EPA
- **Examples:** carbaryl, imidacloprid, methoprene, malathion, glyphosate, 2,4-D, permethrin, chlorothalonil
- Purchase pesticides according to their common or chemical names!

Signal Words and Symbols

- **Signal words** indicate the relative acute (onset < 24 hours) toxicity to humans and animals
- Very low toxicity:  signal words not required
- Almost all labels will have the warning “Keep Out of Reach of Children”


Danger-Poison

Warning

Danger

Caution

Signal Words

| Signal Word | Category | Toxicity | Oral LD ₅₀ |
|--------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------|----------------------------------------|
| Danger-Poison Peligro  | I | High | 0-50 mg/kg < 1 tsp |
| Danger/Peligro | I | High - Eye or skin damage concerns greater than acute lethal toxicity | |
| Warning/Aviso | II | Moderate | 50-500 mg/kg or skin/eye |
| Caution | III | Slight | >500 mg/kg or skin/eye |

Precautionary Statements Include...

- Hazards to humans & domestic animals
- Routes of entry statements
 - “May be fatal if swallowed or inhaled”
- Specific action statements
 - “Avoid contact with skin or clothing”
- Protective clothing and equipment (PPE) statements

Personal Protective (Clothing &) Equipment or PPE

Personal Protective Equipment (PPE): Mixers and loaders involved in ground application must wear coveralls over long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves, and a NIOSH approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH approved respirator with any R, P, or HE filter. Applicators involved in ground ULV application must use an enclosed cab as described in the Engineering Controls section of this label and must wear long-sleeved shirt and long pants, shoes plus socks, and chemical-resistant gloves. Aerial applicators and pilots must use an enclosed cockpit and wear long-sleeved shirt, long pants, shoes, and socks.



Statement of Practical Treatment

First-aid treatments for poisoning or accidental exposure

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with a steady stream of water for 15 minutes. Get medical attention.

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or if available, by administering syrup of Ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

Engineering Controls

- Tells you if any specific devices are required when handling the pesticide
- Are special precautions needed for a specific application method?

Engineering Controls

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water soluble packets must wear the PPE required above for mixer/loaders, and have immediately available for use in emergency (such as a broken package, spill or equipment breakdown) additional PPE. These PPE include coveralls and chemical-resistant footwear and a NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE filter.

When applicators use closed cab motorized ground equipment in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(e)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Environmental Hazard Statements

- Provides information on environmental impacts associated with the pesticide

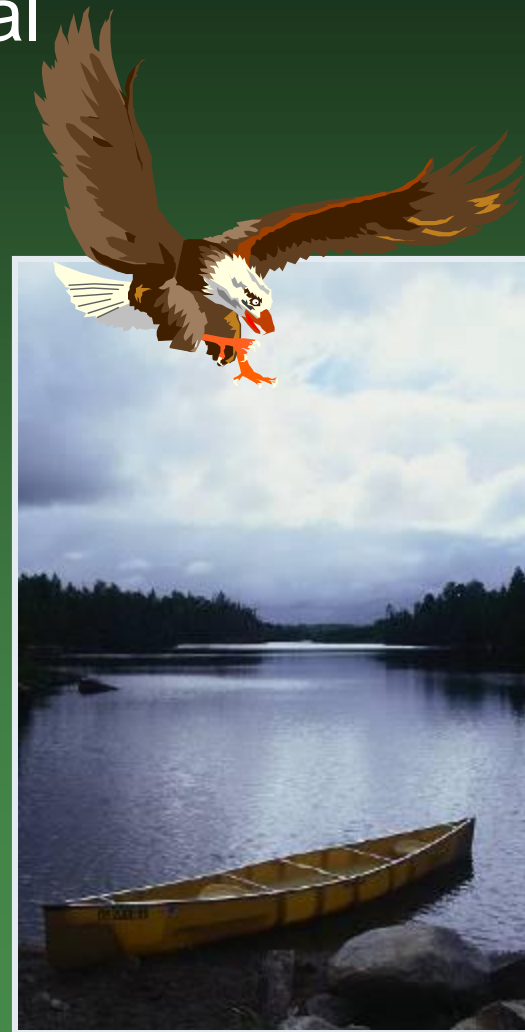
ENVIRONMENTAL HAZARDS

This product is extremely toxic to aquatic and estuarine invertebrates.

Do not contaminate water by cleaning equipment or disposal of wastes.

BEE CAUTION: MAY KILL HONEYBEES IN SUBSTANTIAL NUMBERS.

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 or weeds if bees are visiting the treatment area.



!NEW!

An EPA Bee Advisory Box


Next Slide


Protect Bees and Other Pollinators

THE NEW EPA BEE ADVISORY BOX

On EPA's new and strengthened pesticide label to protect pollinators

PROTECTION OF POLLINATORS

 **APPLICATION RESTRICTIONS** EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- o Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- o Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- o Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- o Minimize drift of this product on to beehives or to off-site pollinator attractive habitat.

Drift of this product onto beehives can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:
<http://pesticidestewardship.org/pollinatorprotection/Pages/default.aspx>

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state/tribe, go to: www.eapco.org. Pesticide incidents can also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

Alerts users to separate restrictions on the label. These prohibit certain pesticide use when bees are present.

The new bee icon helps signal the pesticide's potential hazard to bees.


Makes clear that pesticide products can kill bees and pollinators.

Bees are often present and foraging when plants and trees flower. EPA's new label makes it clear that pesticides cannot be applied until all petals have fallen.

Warns users that direct contact and ingestion could harm pollinators. EPA is working with beekeepers, growers, pesticide companies, and others to advance pesticide management practices.

Highlights the importance of avoiding drift. Sometimes, wind can cause pesticides to drift to new areas and can cause bee kills.

The science says that there are many causes for a decline in pollinator health, including pesticide exposure. EPA's new label will help protect pollinators.



Read EPA's new and strengthened label requirements: <http://go.usa.gov/jHH4>

There is a new pollinator protection label section from EPA. Watch for the bee hazard icon and follow all instructions carefully!

Physical or Chemical Hazards

- Describes any special, fire, explosive or chemical hazards
- **Flammable:** Do not use, pour, spill, or store near heat or open flame. Do not cut or weld container
- **Corrosive:** Store only in a corrosion-resistant tank

Hazard statements on different labels are not necessarily located in same place!



Emergency Contact Information

- Information found on most labels
- CHEMTREC is manned 24-hrs a day, 7 days a week!

For Chemical Spill, Leak, Fire,
or Exposure, Call CHEMTREC
(800) 424-9300

For Medical Emergencies Only,
Call (877) 325-1840



Remember...

- The **host or site must be on the label**, but the pest does not have to be listed
- **Deviation**: Any application method not prohibited may be used: air, ground, etc.
 - except ***chemigation***



Also Remember...

- **Deviation:** A pesticide may be applied at a **lower dose** than specified on the label, ***but not at a higher dose!***
- **Deviation:** Pesticides may be combined with other substances ***unless prohibited by the label***



TANK MIX COMBINATIONS

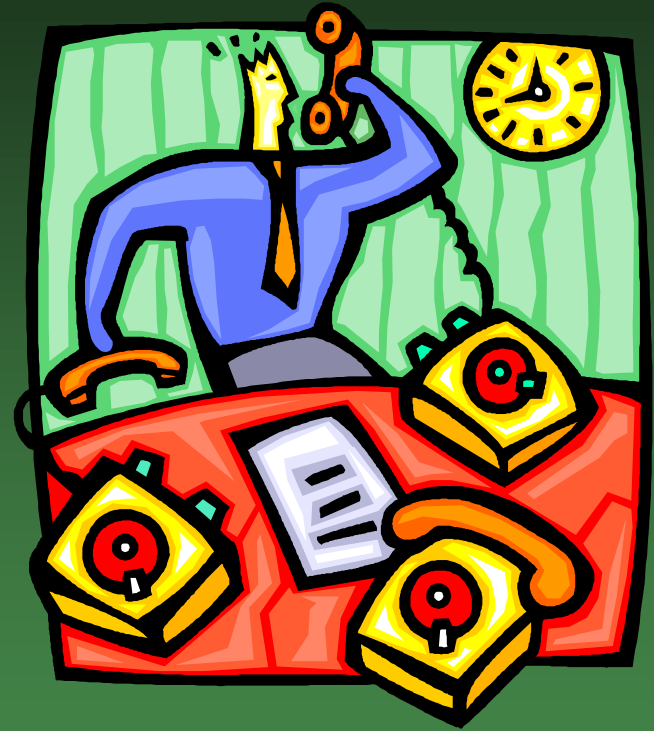
Combination with other herbicides broadens the spectrum of weeds controlled. In addition, total vegetation control can be achieved with higher rates of LANDMARK™ MP plus residual type companion herbicides. To improve postemergence control of weeds, add surfactant at 0.25% by volume or at the manufacturer's recommended rate based on spray area.

LANDMARK™ MP may be applied with the recommended rates of other herbicides registered for this use. For application method and other use specifications, use the most restrictive directions for the intended combination.

Do not tank mix LANDMARK™ MP with DuPont™ HYVAR® X-L herbicide.

Public and Customer Communication

- Create a positive professional image
- Communicate what you are doing
- Stay current in pesticide issues and IPM
- Avoid troublesome phrases when communicating



Avoid Phrases Such as These

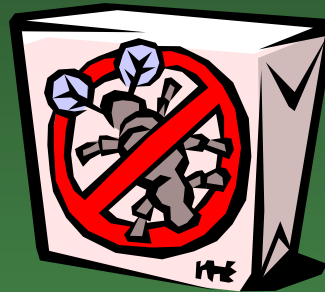
environmentally



EPA-approved



safe or safer

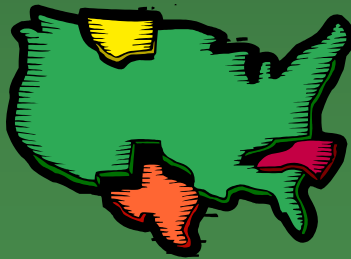


friendly

safe for
children
and pets



natural



state-approved

organic



harmless

Explain to the Customer “what” and “why”

- *What* needs to be done to manage the mosquito problem
- Educate customer on mosquito species present and *why* they have a problem
- Explain your product selection, application technique, and anticipated results



How to Answer Consumer Questions

- Be prepared
- Company training exercises
 - Role-playing
- Copies of pesticide labels, SDSs, application records
- Admit when you don't know the answer, don't lie



Questions?

