



Clopyralid

Pesticide Fact Sheet: Forestry Use

Product Information

- Clopyralid is the common name for the active ingredient in **Transline** herbicide. Clopyralid is a selective systemic herbicide used to control broadleaf weeds on forests, rights-of-way, rangeland, and pastures. It mimics the action of a plant growth hormone. This distorts the leaves and makes them unable to function normally.
- The forestry application formulation is a liquid that contains 41% clopyralid salt and 59% inert ingredients. All inert ingredients in the Transline formulation are in EPA's least toxic categories. Applicators can add adjuvants to the spray solution.
- Foresters use clopyralid at 0.09 to 0.5 pounds active ingredient per acre for control of broadleaf weeds and woody brush on forest lands and areas next to rights-of-way. It can be ground or air broadcast.
- For comparative purposes, the Environment Protection Agency (EPA) categorizes pesticides by their short-term toxicity on a scale of I (most toxic) to IV (least toxic). Undiluted **Transline** is Toxicity Category III.

Public Health

- Researchers use animal studies to define the potential for a pesticide to cause harmful effects to human

health. It is important to know that these tests are carried out using doses high enough to cause toxicity (poisoning). Effects seen at toxic doses in animals are unlikely to occur after short-term, low-level exposure in humans. The level of exposure must be considered to estimate the risk of harmful effects.

- Based on laboratory feeding studies, clopyralid is classified as practically non-toxic to mammals on a short term (acute) basis. It is not a skin sensitizer or dermal irritant; however, it is an eye irritant.
- Rats rapidly excrete clopyralid through the urine. Fecal elimination is a minor path. The pesticide is not metabolized in the body. There is no evidence to suggest that clopyralid has an effect on any endocrine system.
- Laboratory studies indicate that clopyralid did not cause birth defects or reproductive problems except at doses so high that the mothers were poisoned.
- Clopyralid did not cause mutations in any of the tests run.
- Although clopyralid did not cause cancer in either rats or mice, the EPA has not classified it in their classification list.

Wildlife Effects

- Based on laboratory tests, clopyralid is slightly to practically non-toxic to birds, bees, fish, and earthworms.

- Clopyralid does not bioaccumulate in wildlife.

Environmental Fate

- The half-life of clopyralid in soils ranges from 14 to 56 days with the typical time of 40 days. Microbes breaks down clopyralid in soils. Carbon dioxide is the major breakdown product.
- Small amounts of clopyralid added to leaf materials has no effect on the leaf breakdown.
- Clopyralid is classified as very mobile. However, field studies show that clopyralid has minimal potential to contaminate groundwater through leaching.

Risk Assessment

- The EPA has evaluated use practices, environmental fate, potential exposure routes, and toxicity of clopyralid. They have also evaluated the toxicity of clopyralid and set a Reference Dose (RfD) of 0.5 mg/kg/day. This RfD corresponds to an intake of 35.0 mg/day for a 154 lb. (70 kg) person. Such an intake reflects the amount of daily pesticide exposure judged to pose no appreciable risk over a 70-year lifetime. The RfD for clopyralid is based on the results of the most sensitive animal studies (rat) and includes factors designed to provide large margins of safety.

- EPA has determined that the expected exposure associated with clopyralid in right-of-way use will not result in adverse health effects.

However, you should take reasonable precautions to avoid exposure. Do not walk through freshly sprayed vegetation. Do not eat berries, mushrooms, or other edibles, or drink the water from newly treated areas. If you are concerned about exposure, consult the resources listed in

Additional Information.

References

- Meister, R.T., editor. 1996. Farm Chemicals Handbook '96. Meister Publishing Company. Willoughby, OH.
- Tomlin, C., editor. 1994. The Pesticide Manual, Tenth Edition, Crop Protection Publications, British Crop Protection Council and The Royal Society of Chemistry. United Kingdom.
- U.S. Environmental Protection Agency. 1997. Clopyralid: Pesticide Tolerance for Emergency Exemption. Federal Register. March 12, 1997. Volume 62, Number 48, pp. 11360-11364.
- U.S. Environmental Protection Agency. 1997. Office of Pesticide Programs Reference Dose Tracking Report, OPPTS/OPP/HED/SAB/PRS, Washington, D.C.
- Vogue, P.A., E.A. Kerle, and J.J. Jenkins. 1994. OSU Extension Pesticide Properties Database. Department of Agricultural Chemistry. Oregon State University. Corvallis, OR.

Additional Information: Oregon

- Oregon State University Agricultural Chemistry research and Extension
1-541-737-5993 Extension Specialist
- Oregon Poison Control
1-800-222-1222 (National)
1-503-494-8968 (Portland)
1-800-452-7165 (Outside Portland)
- Oregon Department of Agriculture
1-503-986-4550
1-503-986-4635 (Pesticide Division)
- Oregon Health Division Pesticide Analytical Response Center
1-503-731-4025 (8 a.m.-5 p.m., M-F)
1-503-731-4030 (evenings, weekends)

Washington

- Poison Control Center
1-800-222-1222 (National)
1-206-526-2121 (Seattle)
1-800-732-6985 (Outside Seattle)
- Washington Department of Agriculture, Pesticide Management Division
1-877-301-4555 (toll free)
1-360-902-2040 (Olympia)
1-509-576-3064 (Yakima)
- Washington State University Food and Environmental Quality Laboratory
100 Sprout Road
Richland, WA 99352-1643
1-509-372-7462 (phone)
1-509-372-7460 (fax)
- Washington Department of Health
1-800-525-0127
1-360-236-3360 (Pesticide Division)
1-888-586-9427 (toll free)

Nationwide

- National Pesticide Information Center
1-800-858-PEST (7378)
<http://npic.orst.edu/>
- Extension Toxicology Network (EXTOXNET)
<http://ace.orst.edu/info/extoxnet/>
- DuPont Agricultural Products
P.O. Box 80038 Wilmington, DE 19880-0038
1-800-441-7515
1-800-441-3637 (emergency phone)
1-302-992-2276 (fax)