IMAZAPYR CHEMICAL FACT SHEET

Formulations

Imazapyr was registered with the U.S. EPA for aquatic use in 2003 and is currently under registration review. An interim registration review decision was released in 2015. The active ingredient is isopropylamine salt of imazapyr, (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1*H*-imidazol-2-yl]-3-pyridinecarboxylic acid). Imazapyr is labeled for control of emergent and floating-leaf vegetation using direct foliar application. It is not labeled for control of submersed vegetation. Commercial formulations approved for aquatic use in Wisconsin include Habitat®, Ecomazapyr 2 SL, Imazapyr 4 SL and Polaris® AC.*

Aquatic Use and Considerations

Imazapyr is a systemic herbicide (i.e., it moves throughout the plant tissue). It is a WSSA Group 2 herbicide, meaning that the mechanism of action is by inhibiting acetolactate synthase (ALS), an enzyme necessary for plant growth. Affected plants will stop growing after treatment and become reddish at the tips. Plant decomposition will occur gradually over several weeks to months after treatment. Imazapyr should be applied to plants that are actively growing. If applied to mature plants, a higher concentration of herbicide and a longer contact time will be required.

It is important to note that repeated use of herbicides in the same WSSA group (i.e., with the same mechanism of action) can lead to herbicide-resistant plants, even in aquatic environments. In order to reduce the risk of developing resistant genotypes, avoid using the same type of herbicides year after year, and utilize effective integrated pest management strategies as part of any long-term control program.

In Wisconsin, imazapyr is labeled to control non-native Phragmites (*Phragmites australis* subsp. *australis*), purple loosestrife (*Lythrum salicaria*), flowering rush (*Butomus umbellatus*) and Japanese knotweed (*Fallopia japonica*). Native species that imazapyr is also labeled to control include cattails (*Typha* spp.), water lilies (*Nymphaea* spp. & *Nuphar* spp.), pickerelweed (*Pontederia cordata*) and arrowhead (*Sagittaria* spp.).†

Post-Treatment Water Use Restrictions

There are no restrictions on treated water use for recreation, including swimming and fishing, or for livestock water. If application occurs within one-half of a mile of a drinking water intake, the intake must be shut off for 48 hours following treatment. There is a 120-day irrigation restriction for treated water, but irrigation can begin sooner if the concentration falls below 1 part per billion.†

Herbicide Degradation, Persistence and Trace Contaminants

Imazapyr is broken down in the water by light and has a half-life (the time it takes for half of the active ingredient to degrade) ranging from three to five days. In soils imazapyr is broken down by microbes rather than light and has a half-life of one to five months. Imazapyr does not bind to sediments, so leaching into groundwater is likely.

* Product names are provided solely for your reference and should not be considered exhaustive nor endorsements.

† May vary by formulation, application rate, and/or product. Every product label must be carefully reviewed and followed by the user.

Impacts on Fish and Other Aquatic Organisms

Imazapyr has low toxicity to animals because its mechanism of action involves an enzyme not found in animals, and it does not bioaccumulate (the process by which chemicals in the environment or in a food source are taken up by plants or animals) in animal tissues. Imazapyr is practically non-toxic to freshwater fish, freshwater invertebrates, birds and mammals. Imazapyr may be slightly toxic to bullfrog (*Rana catesbeiana*) tadpoles.

Human Health

Concentrated imazapyr is harmful if swallowed, absorbed through the skin or inhaled, and may cause irreversible damage if in eyes. Wear proper personal protective equipment and follow label instructions while handling.

Imazapyr is not carcinogenic, mutagenic, or neurotoxic after long-term exposure. It also does not cause reproductive or developmental toxicity and is not a suspected endocrine disrupter.

For Additional Information

U.S. Environmental Protection Agency (EPA)
Office of Pesticide Programs
epa.gov/pesticides

Wisconsin Department of Agriculture, Trade, and Consumer Protection
datcp.wi.gov/Pages/Programs_Services/ACMOverview.aspx

Wisconsin Department of Natural Resources
608-266-2621
dnr.wi.gov/lakes/plants

Wisconsin Department of Health Services
dhs.wisconsin.gov

National Pesticide Information Center
1-800-858-7378
npic.orst.edu

Wisconsin Department of Natural Resources
PO Box 7921
Madison, WI 53707-7921

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