Wisconsin Department of Natural Resources

December 2022

BISPYRIBAC-SODIUM CHEMICAL FACT SHEET

Formulations

Bispyribac-sodium was registered with the U.S. EPA for aquatic use in 2012. It is currently under registration review. An interim registration review decision was released in 2019. The active ingredient is sodium 2,6-bis[(4,6-dimethoxypyrimidin-2-yl)oxy]benzoate. It is labeled for control of emergent, floating-leaf and submerged vegetation using direct foliar or subsurface application. Commercial formulations approved for aquatic use in Wisconsin include Tradewind®.*

Aquatic Use and Considerations

Bispyribac-sodium is a systemic herbicide (i.e., it moves throughout the plant tissue). It is a WSSA Group 2 herbicide, meaning the mechanism of action is by inhibiting acetolactate synthase (ALS), an enzyme necessary for growth. Affected plants will stop growing soon after treatment and become reddish at the tips. Plant decomposition will occur gradually over several weeks to months. Bispyribac-sodium should be applied in the spring to plants that are actively growing. If applied to mature plants, the effectiveness may be reduced.

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.

The concentration of bispyribac-sodium in the water column must be maintained for 60 to 90 days. Repeat treatments can be made if necessary to "bump" up the concentration to the desired levels. Bispyribac-sodium should not be used in waterbodies with an outlet or flowing water. If there is flowing water at a treated site, higher concentrations or a repeated application may be required.

Bispyribac-sodium is labeled to control the invasive Eurasian watermilfoil (*Myriophyllum spicatum*). Native species that are also labeled as susceptible to bispyribac-sodium include sago pondweed (*Stuckenia pectinata*), duckweed (*Lemna* spp.) and watermeal (*Wolffia columbiana*).†

Post-Treatment Water Use Restrictions

There are no post-treatment restrictions on using treated water for human/livestock consumption, swimming, or fishing. Restrictions on treated water use for irrigation may apply depending on post-treatment bispyribac-sodium concentration and irrigation site.†

Herbicide Degradation, Persistence and Trace Contaminants

Bispyribac-sodium is broken down by microbes and has a half-life (the time it takes for half of the active ingredient to degrade) of 62 days in aerobic environments and 88 to 109 days in anaerobic environments. Bispyribac-sodium is moderately persistent and somewhat mobile in sediment, so leaching into groundwater is likely. The primary degradation product of bispyribac-sodium is highly mobile in sediment.

* 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

The aquatic formulation of bispyribac-sodium is practically non-toxic to freshwater fish and invertebrates. Bispyribac-sodium is also practically non-toxic to both birds and mammals. Bispyribac-sodium does not bioaccumulate (the process by which chemicals in the environment or in a food source are taken up by plants or animals). None of the degradation products have been identified at this time to be of any toxicological concern.

As with all chemical herbicide applications, read and follow all label instructions to prevent adverse environmental impacts.

Human Health

Chemical applicators are primarily at risk of toxic effects after short-term exposure to bispyribac-sodium. Bispyribac-sodium can cause harm if swallowed or adsorbed through skin or eyes. Wear proper personal protective equipment and follow label instructions while handling.

There is currently no evidence of bispyribac-sodium exposure causing birth defects, reproductive toxicity or genetic mutations in mammals. Bispyribac-sodium is not metabolized by humans and, if ingested, is excreted intact.

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

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