

Specifically Regulated Pesticides in Florida - Methyl Bromide¹

Frederick M. Fishel²

Methyl bromide, one of the family members of the hydrocarbon fumigants, has been used for many years throughout the United States. Fumigants are non-selective pressurized gases or liquids which change into the gaseous phase. Their function relies on their remarkable capacities for diffusion, providing a thorough pest kill. Because of methyl bromide's high acute toxicity, it is classified as a restricted use pesticide (Figure 1).

Methyl bromide is an odorless, colorless gas that has been used as an agricultural soil and structural fumigant since the 1940s. However, at the time of this publication, the amount of methyl bromide produced and imported in the U.S. has been incrementally reduced in a phase-out. The only uses allowed are those deemed as "critical uses." This exemption allows methyl bromide use for purposes where no viable pest control alternatives exist. The phase-out falls under the Clean Air Act because methyl bromide has been identified by the EPA as a Class 1 ozone-depleting substance. Methyl bromide products are labeled DANGER. Many methyl

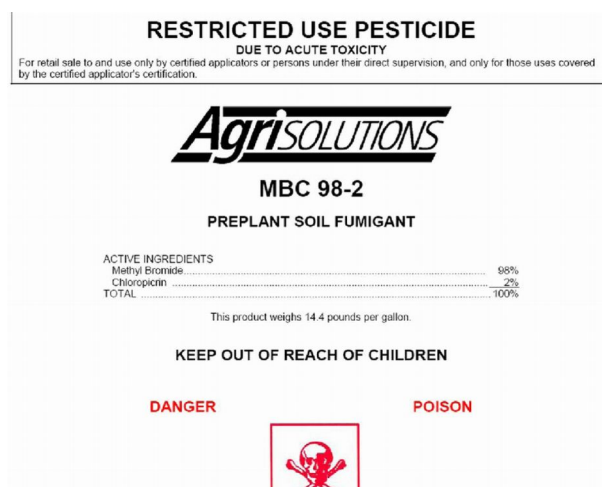


Figure 1. Restricted use designation on a methyl bromide product label.

bromide formulated products also contain chloropicrin. In agricultural applications, methyl bromide is injected into the soil and immediately covered with tarps which must remain in place for at least 48 hours for effectiveness (Figure 2).

1. This document is PI-157, one of a series of the Agronomy Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date October 2007. Visit the EDIS Web Site at <http://edis.ifas.ufl.edu>.

2. Fredrick M. Fishel, associate professor, Agronomy Department, and Director, Pesticide Information Office: Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611

The use of trade names in this publication is solely for the purpose of providing specific information. UF/IFAS does not guarantee or warranty the products named, and references to them in this publication does not signify our approval to the exclusion of other products of suitable composition. All chemicals should be used in accordance with directions on the manufacturer's label. Use pesticides safely. Read and follow directions on the manufacturer's label.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Larry Arrington, Dean



Figure 2. Methyl bromide application.

Definitions pertaining to methyl bromide under Chapter 5E-2, Florida Administrative Code - "Pesticides:"

- **Application site** - the specific field being treated with methyl bromide.
- **Application equipment** - any purgeable equipment used for the application of methyl bromide as a soil fumigant.
- **Designated agent** - a commercial applicator retained for the purpose of applying methyl bromide. The term may also apply to a grower or growers employee who is a certified applicator.
- **Operator** - any person on the application equipment during methyl bromide application.

Effective dates

Effective January 31, 1991, any formulation of methyl bromide registered for distribution and sale in Florida for soil fumigation shall contain a minimum of 0.5% chloropicrin as a warning agent.

Effective January 31, 1992, any formulation of methyl bromide in channels of trade in Florida registered for distribution and sale as a soil fumigant shall contain a minimum of 0.5% chloropicrin as a warning agent.

Applicator requirements

A designated agent must be present at the application site during all phases of methyl bromide application or handling.

Application equipment

- The use of any non-purgeable methyl bromide application apparatus is prohibited.
- Application equipment and methods for the use of methyl bromide as a soil fumigant shall meet the following requirements:
 - Teflon™ hoses reinforced with stainless steel wire braid or its equivalent between any fumigant container and the flow divider.
 - Injection apparatus of a length sufficient to insure an injection depth of not less than six inches below the soil surface unless amended product labeling approved by FDACS states otherwise.
 - Soil shall be adequately sealed by rolling, tarping, or packing to prevent escape of methyl bromide.
 - Operator seats located over injection apparatus shall be in such a position to prevent worker exposure.

Safety equipment

- At least five gallons of potable water shall be kept on the application equipment clearly marked "Decontamination Water – Not To Be Used For Drinking." An additional supply of water, not less than five gallons, so marked, shall be kept at a separate location on the application site.
- A self-contained breathing apparatus shall be on site, but not located on the application equipment.

Exemptions

- Methyl bromide fumigation, by raised tarp method, of plant beds and other small areas, such as golf greens and potting soil.
- Methyl bromide fumigation of potting mix, greenhouse soils, and sites treated specifically for control of ants.

Additional information

Florida Department of Agriculture and Consumer Services. 1995. Restrictions on the Use of Methyl Bromide as a Soil Fumigant; Application Equipment Requirements
<https://www.flrules.org/gateway/RuleNo.asp?ID=5E-2.036>.

U.S. EPA. 2007. Laws and Regulations.

<http://www.epa.gov/pesticides/regulating/laws.htm>