

Herbicide Safety

Contents of Plastic Bag

- This Herbicide Safety sheet
- The Calendar of Control that gives specific information on the timing, application method, and chemical that can be used to control particular invasive species.
- Safety glasses to wear while mixing and using herbicide
- Nitrile gloves in S/M/L/XL to wear while mixing and using herbicide
- Measuring cup to measure out herbicide.
- 32 oz. spray bottle applicator for foliar or cut stem treatment
- Funnel for adding herbicide to spray bottle
- 2 oz. dabber applicator with sponge-top for cut stem treatment
- Small funnel for adding herbicide to dabber
- Garbage bag for disposal of contaminated materials and/or invasive plants

These supplies are for you to keep. **Do not use these devices for any other purpose once they have been exposed to herbicide.**

Safety Information

It is imperative to follow all personal and public safety precautions and environmental requirements when mixing and applying herbicide. The following are general guidelines; you must also follow specific label instructions. The label is law!

Personal Protective Equipment (PPE)—Always wear long sleeved shirts, long pants, safety glasses, and chemical resistant gloves when mixing or applying herbicides.

Mixing Herbicides – Because mixing involves using concentrated herbicides, special care to avoid exposure should be taken during this step. See the other side of this sheet for details on mixing procedures.

Applying Herbicide— When spraying, make sure the weather conditions are favorable (low winds and no rain) and the near-term forecast is for dry weather. Refer to the Calendar of Control for details on the timing and type of application and which chemical to use for specific invasive plant species.

Clean Up and Disposal—triple rinse containers and recycle any plastic with Number 2 on the bottom of the container. Rinse all equipment used in measuring, mixing, and applying herbicide with soap and water to remove all herbicide. Apply the accumulated rinse water back to the site of application.

Emergencies and First Aid – If an herbicide spill has the potential to threaten any ground water or surface water it must be reported immediately to the Indiana Department of Environmental Management Office of Emergency Response at **1-888-233-7745**. If herbicide gets on skin, remove contaminated clothes and wash the herbicide off as soon as possible. If herbicide gets in eyes, wash out the affected eye as quickly but gently as possible with water. Consult the herbicide label for additional first aid directions and see a doctor if necessary.

This information is provided by Monroe County – Identify and Reduce Invasive Species (MC-IRIS) for the education of landowners in Monroe County. If you choose to use herbicide, MC-IRIS is not responsible for any injuries or damage caused by such use.



Quick Reference Guide for Mixing Herbicides

Adapted from River to River CWMA – May 2012

How to use this reference guide: The below chart gives amount of herbicide needed to obtain different commonly used solution strengths for many of the standard sprayer sizes. Each row represents a different mix amount (in gallons) with each column representing different solution strengths (given in % solution).

To mix herbicide, (1) start with one-half of the sprayer filled with water, (2) add the amount of herbicide denoted in chart, and (3) add the remaining amount of water needed to reach desired mix amount. Do not mix close to surface water, a well, or storm drain, and avoid mixing more herbicide than is needed.

Fluid ounces of herbicide needed for desired solution

Mix amount	1%	2%	3%	5%	10%	15%	20%
1 gallon	1.25	2.5	4	6.5	13	19	26
2 gallon	2.5	5	8	13	26	38	51
3 gallon	4	8	12	19	38	58	77
4 gallon	5	10	15	26	50	77	102
5 gallon	6.5	13	19	32	64	96	128
10 gallon	13	25	38	64 (2 qt)	128 (1 gal)	192 (1.5 gal)	256 (2 gal)
15 gallon	19	38	58	96 (3 qt)	192 (1.5 gal)	288 (1.75 gal)	384 (3 gal)
30 gallon	38	77	115	192 (1.5 gal)	384 (3 gal)	576 (4.5 gal)	768 (3.6 gal)
100 gallon	128 (1 gal)	256 (2 gal)	384 (3 gal)	640 (5 gal)	1280 (10 gal)	1920 (15 gal)	2560 (20 gal)

Conversion reference chart

1 gallon = 128 ounces	1 gallon = 4 quarts = 8 pints = 16 cups
1 quart = 32 ounces	1 quart = 2 pints = 4 cups
1 pint = 16 ounces	1 pint = 2 cups
1 cup = 8 ounces	

Definitions

Active ingredient – the ingredient in an herbicide which kills the plant.

Adjuvants – ingredients in an herbicide that improve the activity and effectiveness of the herbicide. A surfactant, a soap-like substance that helps the herbicide cling to leaves, is an example.

Basal bark - is a control method in which an oil soluble herbicide is mixed with an oil carrier instead of water and applied directly to the bark of woody plants

Cut stump – is a control method in which a woody plant is cut and the resulting stump is painted with herbicide.

Foliar spray – is a control method in which herbicide is sprayed onto to the leaves of plants.

For more detail on the safe mixing and use of herbicides see

<https://www.invasive.org/gist/products/handbook/07.herbicideguidelines.pdf>

If you have questions, please contact ellenjacquart@gmail.com

A digital version of this handout may be found at <http://mc-iris.org/information-for-landowners.html>