

MU Guide

Pesticide Dilution Table

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This table shows the approximate amount of a pesticidal concentrate to be mixed with water to produce sprays for use on the farm and around the home. The desired percentage of active ingredient in the finished spray is obtained by mixing the indicated amount of formulation in 100 gallons of water. The number in parentheses () indicates the amount to use in one gallon of water.

Formulation	Amount of formulation to use when desired % of active ingredient in finished spray is:					
	0.03125%	0.0625%	0.125%	0.25%	0.5%	1.0%
Liquid product containing 1 lb chemical/gal	2 pt (2 tsp)	4 pt (4 tsp)	1 gal (8 tsp)	2 gal (16 tsp)	4 gal (10 Tbs)	8 gal ($\frac{2}{3}$ pt)
Liquid product containing 1½ lb chemical/gal	1½ pt (1½ tsp)	3 pt (3 tsp)	6 pt (6 tsp)	1½ gal (12 tsp)	3 gal (7½ Tbs)	6 gal (½ pt)
Liquid product containing 2 lb chemical/gal	1 pt (1 tsp)	2 pt (2 tsp)	4 pt (4 tsp)	1 gal (8 tsp)	2 gal (5 Tbs)	4 gal (10 Tbs)
Liquid product containing 3 lb chemical/gal	$\frac{3}{4}$ pt (¾ tsp)	1½ pt (1½ tsp)	3 pt (3 tsp)	6 pt (6 tsp)	1½ gal (4 Tbs)	3 gal (8 Tbs)
Liquid product containing 4 lb chemical/gal	½ pt (½ tsp)	1 pt (1 tsp)	2 pt (2 tsp)	4 pt (4 tsp)	1 gal (8 tsp)	2 gal (5 Tbs)
Liquid product containing 5 lb chemical/gal	$\frac{7}{16}$ pt ($\frac{7}{16}$ tsp)	$\frac{7}{8}$ pt ($\frac{7}{8}$ tsp)	1¼ pt (1¼ tsp)	3½ pt (3½ tsp)	7 pt (7 tsp)	1¼ gal (4½ Tbs)
Liquid product containing 6 lb chemical/gal	$\frac{5}{8}$ pt (¾ tsp)	$\frac{3}{4}$ pt (¾ tsp)	1½ pt (½ Tbs)	3 pt (1 Tbs)	6 pt (2 Tbs)	1½ gal (4 Tbs)
Liquid product containing 8 lb chemical/gal	$\frac{1}{4}$ pt (¼ tsp)	½ pt (½ tsp)	1 pt (1 tsp)	2 pt (2 tsp)	4 pt (4 tsp)	1 gal (8 tsp)
15% dry product	1½ lb (2½ tsp)	3½ lb (5 tsp)	6½ lb (20 tsp)	13½ lb (7 Tbs)	26½ lb (1 cup)	53½ lb (2 cups)
25% dry product	1 lb (1½ tsp)	2 lb (3 tsp)	4 lb (6 tsp)	8 lb (12 tsp)	16 lb (½ cup)	32 lb (1 cup)
40% dry product	$\frac{5}{8}$ lb (1 tsp)	1¼ lb (2 tsp)	2½ lb (4 tsp)	5 lb (8 tsp)	10 lb (5 Tbs)	20 lb (10 Tbs)
50% dry product	½ lb (¾ tsp)	1 lb (1½ tsp)	2 lb (3 tsp)	4 lb (6 tsp)	8 lb (4 Tbs)	16 lb (½ cup)
80% dry product	5 oz (½ tsp)	10 oz (1 tsp)	1¼ lb (2 tsp)	2½ lb (4 tsp)	5 lb (8 tsp)	10 lb (5 Tbs)
Some helpful equivalents	1 tablespoon (Tbs) = 3 teaspoons (tsp) 1 cup = 16 Tbs 1 cup = 8 fluid ounces (fl oz) 1 tablespoon = ½ fluid ounce			2 cups = 1 pint (pt) 2 pints = 1 quart (qt) 4 quarts = 1 gallon (gal) 1 pound (lb) = 16 ounces (oz) water weighs 8.3 lb/gal		

Pesticide dilution formulas and examples

1. To determine how many gallons of emulsifiable concentrate are needed to mix a spray containing a given percentage of active ingredient:

Formula:
$$\frac{(\text{gallons of spray wanted}) \times (\% \text{ active ingredient wanted}) \times 8.3 \text{ lb/gal}}{(\text{pounds of active ingredient per gallon of concentrate}) \times 100}$$

Example: How many gallons of diazinon 25 percent emulsifiable concentrate (2 pounds diazinon per gallon) are needed to make 100 gallons of spray containing 0.5 percent diazinon?

$$\frac{(100 \times 0.5 \times 8.3)}{(2 \times 100)} = 2 \text{ gallons (rounded off)}$$

2. To determine how many pounds of wettable powder are needed to mix a spray containing a given percentage of active ingredient:

Formula:
$$\frac{(\text{gallons of spray wanted}) \times (\% \text{ active ingredient wanted}) \times 8.3 \text{ lb/gal}}{(\% \text{ active ingredient in insecticide used}) \times 8.3 \text{ lb/gal}}$$

Example: How many pounds of carbaryl (Sevin) 50 percent wettable powder are needed to make 100 gallons of spray containing 1.25 percent carbaryl?

$$\frac{(100 \times 1.25 \times 8.3)}{50} = 21 \text{ pounds (rounded off)}$$

3. To determine the percentage of active ingredient in a spray mixture:

Formula:
$$\frac{(\text{pounds of insecticide used}) \times (\% \text{ active ingredient})}{(\text{gallons of spray mixture}) \times (8.3 \text{ lb/gal})}$$

Example: Eight pounds of carbaryl (Sevin) 50 percent wettable powder were mixed in 100 gallons of water. What percentage of carbaryl did the finished spray contain?

$$\frac{(8 \times 50)}{(100 \times 8.3)} = 0.48 \text{ percent}$$

