



Herbicide Mixing Order

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The order in which a herbicide and other ingredients are added into a spray tank can have a serious effect on the performance of a herbicide application. Proper mixing order ensures incompatible products do not gel or form precipitates that can clog/ruin spray equipment and/or antagonize one another resulting in decreased weed control. The best way to determine the proper mixing order for spray products is to consult the product labels. However, in the past, acronyms have been helpful guides (e.g., W-A-L-E-S). Based on several current mixing order recommendations, an updated acronym (A-W-A-M-L-E-S) is described below.

Fill CLEAN tank 1/2 to 3/4 full with water or other carrier. If an inductor is used, rinse it thoroughly after each component is added. Add compatibility agent and/or defoamer.



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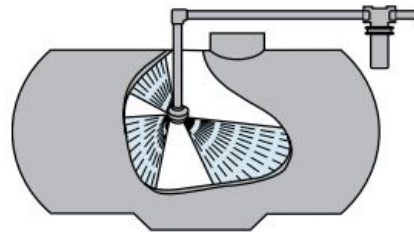
W – Water dispersible products (wetable powders (WP), dry flowables (DF), etc.)

*Make a slurry with water and then add slowly to tank



A – Agitate tank until all water-soluble products are in solution

*This will take a few minutes



M – Microcapsule suspension (ME) and other suspensions

(suspension concentrate (SC), aqueous suspension (AS), etc.)

A – Ammonium sulfate (AMS) only products, *continue agitating tank*

*A product that includes AMS + a surfactant premixed will typically be added last



WARRANT® is an encapsulated herbicide for weed control in Field Corn, Production Seed Corn, Cotton, Forage or Grain Sorghum (Milo), and Soybeans.

EPA Reg. No. 524-591

2014-1

COMPLETE DIRECTIONS FOR USE
SHAKE WELL BEFORE USING



ACTIVE INGREDIENT	33.0%
*Kasachlor	52.0%
OTHER INGREDIENTS	100.0%

*Contains 359 grams/liter or 3.0 pounds/gallon of 2-chloro- N-(2-ethoxymethyl-N-(2-ethyl-6-methylphenyl)acetamide)

L – Liquids that are soluble (SL)

E – Emulsifiable concentrates (EC)

S – Surfactants [nonionic surfactant (NIS), crop oil concentrate (COC), methylated seed oil (MSO)]



The image shows the label for Dual Magnum Herbicide. At the top, it says "GROUP 16 HERBICIDE". The product name "Dual Magnum" is in a large, bold font, with "Herbicide" underneath. The Syngenta logo is at the bottom. Below the logo, there is a list of crops and weeds it controls: "For weed control in corn; cotton; grasses grown for seed; horseradish; peanuts; beans, peas, and lentils; potatoes; pumpkin; rhubarb; safflowers; sugar beets; sunflowers; sweet, grain or forage sorghum; soybean; soybean, immature seed; and tomatoes". Below this is a table of ingredients:

Active Ingredient:	
S-metolachlor (CAS No. 87392-12-9)	83.7%
Other Ingredients:	16.3%
Total:	100.0%

Below the table, it states: "Dual Magnum is formulated as an Emulsifiable Concentrate (EC). Dual Magnum contains 7.62 lb of active ingredient per gallon."

Many products available!
Read the label.
More ingredients does not always equal a superior product.

Add remaining water and continue agitation throughout application.

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