

ZONE DEFENSE®

herbicide



TECHNICAL FACT SHEET

Dual zones of defense against problematic weeds in soybeans

Zone Defense® is a novel blend of two PPO chemistries for early preplant or preemergence weed control for all types of soybean production systems.

Offering dual zones of protection that extend from the soil surface to a deeper layer in the soil, Zone Defense controls more than 75 grass and broadleaf weeds including resistant species, and keeps them down with up to 60 days of residual activity.

Product Specifications

Brand Name	Zone Defense®
Category	Herbicide
Active Ingredient	Sulfentrazone + Flumioxazin
Crops	Soybeans
Site of Action	Group 14 / Group 14
Formulation	Water dispersible granule
AI/Gallon	Sulfentrazone 0.62 lbs a.i./g Flumioxazin 0.15 lbs a.i./g
Applications	Preplant surface / PPI / Preemergence
Rates	
Used Alone	Zone Defense @ 5.0 oz/A
Tank mix	Zone Defense @ 5.0 oz/A + Helmet SPC @ 1.67 pt/A
Weed Spectrum	Broadleaf & grass species
Signal Word	Caution

Primary Weeds Controlled (or suppressed)

Amaranth species, American daisy, Annual sedge, Bristly starbur, Carpetweed, Catchweed, Chamomile mayweed, Chickweed, Coffee senna, Copperleaf (hophornbeam, Virginia), Crabgrass species, Curly dock, Devil's claw, Eclipta, Flixweed, Golden crownbeard, Goosegrass, Groundcherry (clammy, cutleaf), Hairy galinsoga, Hedgehog cyperus, Jimsonweed, Kochia (ALS, triazine resistant), Ladythumb, Lambsquarters, Mallow, Miners lettuce, Morningglory species, Mustard species, Nightshade (black, eastern black), Nutsedge (purple, yellow), Orchardgrass, Palmer amaranth, Panicum (fall, Texas), Pennsylvania smartweed, Pigweed species, Plantain species, Poorjoe, Porophyllum, Prickly sida/Teaweed, Purslane, Redmaids, Redstem filaree, Red tasselflower, Redweed, Russian thistle, Shepherd's purse, Sicklepod, Smellmellon, Southern sida, Spurred anoda, Stinkgrass, Tropic croton, Waterhemp, Wild poinsettia, Winged waterprimrose, Witchgrass, Woolly cupgrass, Yellow toadflax



SOYBEANS

ZONE DEFENSE®

REI	12 hours
PHI	N/A
Restricted Use	No
Packaging	2 x 10 lbs
EPA #	74530-91



CROPS	
Soybeans	

APPLICATION RATES AND GUIDELINES

Soybeans
Fall, Spring Preplant Surface, PPI, Preemergence Rates: oz/A

Zone Defense Use Rates			
% Organic Matter	Soil Texture		
	Coarse	Medium	Fine
0.5 - 2.0%	3.5 - 4.0	4.5 - 5.5	5.0 - 6.0
2.0 - 4.0%	4.0 - 5.0	5.0 - 6.0	6.0 - 6.6

Use higher rates for soils with pH less than 7.0. Use lower rates for soils with pH greater than 7.0.
Do not apply more than 6.6 oz/A of Zone Defense per application.
Do not apply more than 9.6 oz/A of Zone Defense per a 12 month period.

Coarse = Sand, Loamy Sand, Sandy Loam
Medium = Sandy Clay Loam, Sandy Clay, Loam, Silt Loam, Silt
Fine = Silty Clay Loam, Silty Clay, Clay Loam, Clay

PRODUCT FEATURES

- Optimal AI ratio for superior results.
- Dual zones of protection in the soil.
- Rainfast within one hour of application.
- Versatile application by ground or air.

PERFORMANCE BENEFITS

- Novel premix of two powerful actives.
- Use flexibility prior to crop emergence.
- Up to 60 days of residual activity.
- Controls or suppresses 75+ weed species.

USE RESTRICTIONS

Early Preplant (No-till, minimum tillage, or stale seedbed)	Zone Defense must be applied in combination with a labeled burndown herbicide such as glyphosate, glufosinate, paraquat, and/or 2,4-D to achieve acceptable control of existing weeds. Zone Defense is rainfast after one hour when applied as a burndown. For applications 30 to 60 days before planting, apply the higher rate in the appropriate soil range using the above table depending on soybean system being grown.
Preplant Incorporated	Uniformly incorporate Zone Defense alone or in a tank mix no deeper than 2 inches prior to planting. Improper incorporation can result in erratic weed control or potential crop injury.
Preemergence	Zone Defense may be applied at planting time or within 3 days after planting, but before seed emergence. It may be applied alone or in tank mix with other labeled herbicides. Seed furrow should be completely closed and seed covered before making a Zone Defense application.

Burndown applications prior to crop emergence require use of a COC, MSO, NIS adjuvant.
NOTE: Certain tank mix partners may be formulated with sufficient adjuvants (not requiring additional adjuvant).



For more information, visit helmagro.com.

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