ADJUVANT USE GUIDE

FOR TURF

PRECISION™ LABORATORIES

Results. Expect it.®

Herbicide Active Ingredient	Precision Adjuvant	Adjuvant Use Rate	Drift Reduction
2,4-D	Compound™	1 - 3 pints / 100 gallons	not necessary
Amicarbazone	SYNC®	1 pint / 100 gallons	Border™ 2.0 (label rate)
Asulam	SYNC	10 - 12 ounces / acre	Border 2.0 (label rate)
Atrazine	Microyl™	10 - 12 ounces / acre	Border 2.0 (label rate)
Benefin	not recommended		Border 2.0 (label rate)
Bensulide	Alypso Plus™	32 ounces / acre	not necessary
Bentazon	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Bispyribac-sodium	not recommended		Border 2.0 (label rate)
Carfentrazone	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Chlorsulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Clethodim	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Clopyralid	not recommended		Border 2.0 (label rate)
CMA, DSMA, MSMA	not recommended		Border 2.0 (label rate)
DCPA	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Dicamba	Compound	1 - 3 pints / 100 gallons	not necessary
Diclofop	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Dichlorprop	Compound	1 - 3 pints / 100 gallons	not necessary
Dimethenamid	not recommended		Border 2.0 (label rate)
Diquat	SYNC (non-aquatic uses)	1 pint / 100 gallons	Border 2.0 (label rate)
Dithiopyr	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Ethofumesate	not recommended		Border 2.0 (label rate)
Fenoxaprop	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Flazasulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Florasulam	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Fluazifop	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Flumioxazin	Compound	1 - 3 pints / 100 gallons	not necessary
Fluroxypyr	Compound	1 - 3 pints / 100 gallons	not necessary
Foramsulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Glufosinate	Compound	1 - 3 pints / 100 gallons	not necessary
Glyphosate	Compound	1 - 3 pints / 100 gallons	not necessary
Halosulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Imazapic	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Imazaquin	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
imazosulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Indaziflam	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Iodosulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Isoxaben	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
MCPA	Compound	1 - 3 pints / 100 gallons	not necessary
Mecoprop (MCPP)	Compound	1 - 3 pints / 100 gallons	not necessary
Mesotrione	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Metolachlor	not recommended		Border 2.0 (label rate)
Metribuzin	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Metsulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Napropamide	not recommended		Border 2.0 (label rate)
Oryzalin	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Oxadiazon	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Pendimethalin	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Penoxsulam	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Prodiamine	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Pronamide	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Pyraflufen ethyl	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)

Quinclorac	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Rimsulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Sethoxydim	not recommended		Border 2.0 (label rate)
Siduron	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Simazine	not recommended		Border 2.0 (label rate)
Sulfentrazone	not recommended		Border 2.0 (label rate)
Sulfosulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Thiencarbazone	SYNC (With SU's use Microyl)	1 pint / 100 gallons	Border 2.0 (label rate)
Topramezone	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)
Triclopyr	Compound	1 - 3 pints / 100 gallons	not necessary
Trifloxysulfuron	Microyl	10 - 12 ounces / acre	Border 2.0 (label rate)

Fungicide Active Ingredient	Adjuvant	Adjuvant Use Rate	Drift Reduction
Azoxystrobin	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Boscalid	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Chloroneb	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Chlorothalonil	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Chlorothalonil + acibenzolar-s-methyl	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Cyazofamid	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Difenoconazole	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Ethazole	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Fenarimol	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Fluazinam	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Fludioxonil	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Fluopicolide + propamocarb	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Fluoxastrobin	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Flutolanil	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Fluxapyroxad	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Fosetyl Al	not recommended		Border 2.0 (label rate)
Iprodione	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Mancozeb	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Mancozeb + copper hydroxide	Alypso Plus	1 pints / 100 gallons	Border 2.0 (label rate)
Mefenoxam	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Metalaxyl	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Metconazole	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Myclobutanil	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
PCNB	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Penthiopyrad	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Phosphorous acid	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Polyoxin D	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Propamocarb	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Propiconazole	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Pyraclostrobin	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Tebuconazole	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Thiophanate-methyl	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Thiram	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Triadimefon	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Trifloxystrobin	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Triticonazole	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Vinclozolin	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)

Insecticide Active Ingredient	Adjuvant	Adjuvant Use Rate	Drift Reduction
Abamectin	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Acephate	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Azadirachtin	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Bifenthrin	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Bacillus thuringiensis (Bt)	not recommended		Border 2.0 (label rate)
Carbaryl	Alypso Plus	1 pint / 100 gallons	Border 2.0 (label rate)
Chlorantraniliprole	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Chlorpyrifos	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Chlothianidin	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Cyfluthrin	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Dinotefuran	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Imidacloprid	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Lambda-cyhalothrin	SYNC (foliar) / Alypso Plus (soil)	2 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Pyrethroids	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Spinosad	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)
Thiamethoxam	SYNC (foliar) / Alypso Plus (soil)	1 pint / 100 gallons (SYNC) or 32 ounces / acre (Alypso Plus)	Border 2.0 (label rate)
Trichlorfon	Alypso Plus	1 pint / 100 gallons	Border 2.0 (label rate)

Plant Growth Regulator Active Ingredient	Adjuvant	Adjuvant Use Rate	Drift Reduction
Ethephon	not recommended		Border 2.0 (label rate)
Flurprimidol	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Paclobutrazol	Alypso Plus	32 ounces / acre	Border 2.0 (label rate)
Trinexapac - ethyl	SYNC	1 pint / 100 gallons	Border 2.0 (label rate)

Adjuvant Effects on Efficacy

With Water-Soluble Products	**Crop Oil Concentrate (COC)**	**Methylated Seed Oil (MSO)**	**High Surfactant Oil Concentrate (HSOC)**	**Nonionic Surfactant (NIS)**
With Oil-Soluble Products	**Nonionic Surfactant (NIS)**	**High Surfactant Oil Concentrate (HSOC)**	**Crop Oil Concentrate (COC)**	**Methylated Seed Oil (MSO)**
	low efficacy			high efficacy

Plant Safety

Adjuvant Choice	**Crop Oil Concentrate (COC)**	**Methylated Seed Oil (MSO)**	**High Surfactant Oil Concentrate (HSOC)**	**Nonionic Surfactant (NIS)**
	low safety			high safety

Adjuvant Use with Emulsifiable Concentrates (ECs)

Number of ECs in Tank Mix	Adjuvant Choice
1	HSOC or MSO or COC
2	HSOC or NIS
3 or more	Do not use adjuvant

These charts are general guidelines, for more detailed information, contact your Precision Laboratories representative.

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