

Turf & Ornamental Product Guide



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WHEN YOUR BUSINESS DEPENDS ON IT.™

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At Univar, we carry a full line of Turf & Ornamental products (herbicides, fertilizers, insecticides and fungicides) from all the best brands. With over 65 ProCenters across the country, a fleet of delivery trucks, and an experienced sales team ready to take care of your unique needs, you can get most anything you need when you need it. From our products to our people, Univar has countless T&O resources to help you grow your business.

Univar Online Store

Ordering supplies online has never been easier. Every product in our expansive catalog is organized so you can quickly find what you need. With product images, history lists, order updates and links to MSDS and Label documents, The Univar Online Store is the most complete online ordering resource.

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HERBICIDES

Pre-Emergent

Barricade 4 FL, 65 WG – prodiamine
Broadstar – flumioxazin
Bromacil 40/40 (Alligare) – bromacil
Bromacil 80 WP (Alligare) – bromacil
Chlorsulfuron 75
Cruise Control (Alligare) – dimethylamine salt of dicamba
Devrinol – napropamide
Dimension 2EW Herbicide + Defendor (pre/post) – dithiopyr, florasulam
Dimension 2EW Specialty Herbicide – dithiopyr
Dimension Ultra WP – dithiopyr
Dithiopyr 40 WSB, L
Diuron 4L, 80 DF
Ecomazapyr 2 SL – isopropylamine salt of imazapyr
Ecotriclopyr 3 SL – triclopyr
Freehand 1.75G – dimethenamid – P
Gallery 75DF – isoxaben
Gallery SC – isoxaben
Goal 2XL – oxyfluorfen
Hyvar – bromacil, non – selective
Imazapyr 4 SL (Alligare) – imazapyr
Isoxaben 75 WG
Kerb – (pre and post) benzamide
Krovar I – bromacil, diuron
Landmark XP – sulfometuron methyl
Oryzalin (Quali-Pro) – oryzalin
Oryzalin 4
Oust – sulfometuron methyl
Oxadiazon 2G, SC
Oxyfluorfen (Quali-Pro) – oxyfluorfen
Payload – flumioxazin
Pendulum (3.3 EC, 2G, Aquacap) – pendimethalin
Pennant Magnum – s – metolachlor
Princep – simazine
Prodiamine 65 WDG
Ronstar Flo, G – oxadiazon
SFM 75 (Alligare) – sulfometuron methyl
Snapshot – isoxaben, trifluralin
Snapshot – trifluralin
Specticle (Flo, G) – Indaziflam
SureGuard SC – flumioxazin
Surflan AS – oryzalin
T/I 2.5 G – Trifluralin, Isoxaben
Team – benfluralin, trifluralin
Transline – clopyralid
Treflan – trifluralin
XL 2G – benefin, oryzalin

Selective Postemergent

2,4-D Amine

2-D – triclopyr, clopyralid

3-D – dimethylamine salt of 2, 4-D,dix

4 Speed XT – 2,4-D, triclopyr, Dicamba, pyraflufenethyl

Acclaim Extra (cool season turf) – fenoxaprop-p-ethyl NOT IN CA

Atra – 5 – atrazine

Avenue South – penoxsulam, sulfentrazone, 2,4 – D, Dicamba

Blade – metsulfuron methyl

Capstone (VM, pre/post) – triclopyr (amine version), triisopropanolammonium salt (aminopyralid)

Celsius WG – Thien carbazon-methyl, Iodosulfuron-methyl-sodium, dicamba

Certainty – sulfosulfuron

Chlorsulfuron 75

Clopyralid 3 (Alligare) – clopyralid

Confront Specialty Herbicide – triclopyr, clopyralid

Cool Power – mcpa, trichlopyr, dicamba

Defendor Herbicide – florasulam

Dicamba 4

Dismiss CA – sulfentrazone

Dissolve – 2,4-D, mecoprop

Drive 75DF – quinclorac

Escalade 2 – 2,4-D, Fluroxypyr, Dicamba

Finale – Glufosinate ammonium

Garlon – trichlopyr

Goal 2XL – oxyfluorfen

Horsepower – MCPA, triclopyr, dicamba

Katana – flazasulfuron

Laramie 25 DF – rimsulfuron

Lontrel – clopyralid

Milestone (VM, pre/post) – triisopropanolammonium salt (aminopyralid)

Millenium Ultra – 2,4-D, clopyralid, dicamba

Monument 75 wg – trifloxysulfuron sodium

MSMA 6 Plus – Golf Course Only

Opensite (VM, pre-post) – metsulfuron, potassium salt (aminopyralid)

Power Zone – carfentrazone ethyl, mcpa, mecoprop, dicamba

Prograss EC – ethofumesate

Q4 Plus – quinclorac, sulfentrazone, 2,4-D, Dicamba

Quik Silver – carfentrazone ethyl

Quinclorac 1.5L, 75 DF

Rimsulfuron 25 DF

Revolver – foramsulfuron

Sapphire – penoxsulam

Sedgehammer Plus – halosulfuron-methyl

SedgeMaster – halosulfuron-methyl

Sencor 75 – Metribuzin

SpeedZone Broadlead – carfentrazone ethyl, mecoprop, dicamba acid, 2,4-D

SpeedZone Southern – carfentrazone ethyl, mecoprop, dicamba, 2,4-D

(lo 49% 2,4-D)

Surge – sulfentrazone, 2,4-D, MCPP, dicamba

Tenacity – mesotrione

Tordon 22K – picloram (safe on grasses)

Transline – clopyralid

Triamine Jet Spray – 2,4-D, MCPP, dichlorprop

Tribute Total – thiencazuron-methyl, foramsulfuron, halosulfuron-methyl

Trimec Classic – 2,4-D, MCPP, dicamba

Triplet Sensitive – 2,4-D, MCPP, dicamba

Turflon Ester – trichlopyr

T-Zone – triloxyr, sulfentrazone, 2,4-D, dicamba

Vastlan (VM, nonvolatile) – triclopyr

Non-Selective Postemergent

2-D – Triclopyr, Clopyralid

3-D – Dimethylamine Salt of 2, 4-D, Dimethylamine Salt of (+)-R-2-propionic acid,
Dimethylamine Salt of Dicamba

Accord XRT II (VM) – glyphosate (DMA salt)

Aquaneat – glyphosate

Boulder 6.3 – triclopyr BEE (low VOC)

Diquat – diquat

Dryphosate 75 SG – glyphosate

Garlon 3A – triclopyr

Garlon 4 Ultra – triclopyr

Glyphosate 4 Plus (Quali-Pro) – glyphosate

Glyphosate 5.4

Glyphosate Plus

Montar – cacodylic acid

Pathfinder 2 (VM) – triclopyr (basal bark/cut stump)

Postemergent

Quik-Fire – ammoniated soap of fatty acid

Ranger Pro – 41% glyphosate

Razor Pro – glyphosate

Reward – diquat

Rodeo – glyphosate, aquatic weed control

Roundup Pro Concentrate – 50% glyphosate

Roundup PROMAX – glyphosate

Roundup QuikPro – glyphosate, diquat

Scythe – perlargonic acid

SedgeMaster - Halosulfuron-methyl

Specticle Total – Indaziflam, Diquat dibromide, glyphosate isopropylamine salt

Tahoe 4 E – triclopyr

Triclopyr 4 EC (Quali-Pro) – triclopyr

Vastian (vm, nonvolatile) – triclopyr

Grasses & Sedges

Arrow 2E – clethodim

Envoy – clethodim

Fusilade II – fluazifop-butyl

Kerb SC – pronamide
Ornamec w/ Aquasorb – folazifop-p-butyl
Poast – sethoxydim
ProSedge 2 – sulfonylurea
Vastian (vm, nonvaltile) – triclopyr

Aquatic Weed and Algae Control

2,4-D Amine

Aquaneat – glyphosate
Aquathol – dipotassium endothall, herbicide
Argos – copper ethanolamine complex
Captain – liquid chelated copper, algaecide
Copper Sulphate – copper sulphate
Clipper – flumioxazin
Cutrine – chelated elemental copper, algaecide
Diquat
Ecomazapyr 2SL – isopropylcamine salt of imazapyr
Fluridone
Garlon 3A – triclopyr
Greenclean Pro – algaecide plus
Greenshield CA – algaecide and disinfectant
Imazapyr 4 SL
Reward – diquat
Rodeo – glyphosate
Roundup Custom – glyphosate
Triclopyr 3
Vastlan (VM, nonvolatile) – triclopyr

PLANT GROWTH REGULATORS

Atrimmec – atrinal
B-Nine – daminozide
Bonzi – substituted triazole
Cycocel – chlormequat
Ethephon 2SL
Florel – ethephon
Maintain CF125 – methylocorohydroxyfluorene
Pac-Low – Paclobutrazol
Primo Maxx – trinexapac-ethyl
ProGibb T&O – gibberellic acid
Proxy – ethephon
Retard – maleic hydrazide
Shortstop 2SC – paclobutrazole B-Nine-daminozide
Sumagic – uniconazole p
T Nex 1AQ (Quali-Pro) – trinexapac-ethyl
Trimmit 2SC – paclobutrazol

INSECTICIDES

General Use Turf & Ornamental Insecticides/Miticides

435 – Oil 98.8%

Abamectin .15 EC

Ace-Jet – Acephate

Acelepryn – chlorantraniliprole

Acephate 90 – acephate

Adept – diflubenzuron, IGR

Advion – indoxacarb

Allectus SC – bifenthrin/imidacloprid

Altus – flupyradifurone

Abamectin .15 EC

Arena 50 WDG 025G – clothianidin

Aria – fonicamid

Avid – abamectin

AzaSol – azadirachtin

Azatrol EC – azadirachtin, IGR

Baseline – bifenthrin (oil base, high %)

Bifenthrin Nursery 7.9 – bifenthrin

Chlorpyrifos 4E

Citation – cyromazine

Conserve SC – spinosad

CoreTect – imidacloprid

Coretect – Imidacloprid + Fertilizer NOT IN CA temporarily

DeltaDust – deltamethrin

DeltaGuard GC – deltamethrin

Dimethoate

Dipel – *Bacillus thuringiensis* var. *kurstaki*

Discuss – imidacloprid

Distance IGR – pyriproxyfen

DuraGuard ME – chlorpyrifos

Dursban 50W – chlorpyrifos

Dylox (420SL, 6.2G) – Trichlorfon NOT IN CA

Eco1 – linseed oil, thyme oil, peppermint oil

Eco-Mite – rosemary, rosemary oil, peppermint, cottonseed oil

Endeavor – pymetrozine

Flagship – thiamethoxam

Floramite – bifenazate

Forbid 4F – Spiromesifen

Gnatrol WDG – *bacillus thuringiensis*

Hexagon – hexythiazox

Ima-Jet – imidacloprid

Ima-Jet 10 – imidacloprid

Imidacloprid 2F, 75WSP 0.5G – imidacloprid

ImidiPro (PBI Gordon) – imidacloprid

Indemnify (Nematicide) – fluopyram

Intrepid 2F – methoxyfenozide (IGR, caterpillar control)
Judo – spiromesifen
Lambda GC-0
Mainspring GNL – Cyantraniliprole
MasterLine® B-Maxx – bifenthrin
MatchPoint – spinosad (lignin formulation for turf)
Mavrik – tau-fluvalinate
Meridian 0.33G, 25WG – Thiamethoxam
Merit G, 2F, WP, WSP – imidacloprid
Minx – abamectin (warning)
Minx 2 – abamectin (low VOC, caution)
M-Pede – potassium salts of fatty acids
Nemacur 10%G – fenamiphos
Nimitz Pro G – Fluensulfone (nematicide)
Onyx Pro – bifenthrin (oil base, high %)
Orthene TTO – acephate
Provaunt – Indoxacarb
Pylon – pyrrole/chlorfenapyr
Safari – dinotefuran
Sanmite – pyridaben
Scimitar GC – microencapsulated lamdacyhalothrin
Sevin SL – Carbaryl
Shuttle – acequinocyl
Siesta Fire Ant Bait – metaflumizone
Storgard Insect Monitoring Systems – pheromones & baits
Sultan – cyflumetofen (miticide)
Suspend – deltamethrin
Talstar Pro, Nursery – bifenthrin
Talstar Xtra Verge – zeta cypermethrin, bifenthrin
Tame – fenpropathrin
Taurus G Trio – (RUP-Fipronil)
Tempo Ultra (SC, WP, WSP) – cyfluthrin
Tetrasan – etoxazole
Todal – Abamectin (insecticide/nematicide)
Topchoice – fipronil ONLY IN COACHELLA VALLEY
Tree-Age G4 – emamectin
Tree-Age – emamectin
Tristar – acetamiprid
Zylam – dinotefuran

Insect Bait Products

Advance – abamectin
Advion – indoxacarb
Amdro – hydramethylnon
Award Fire Ant Bait – fenoxycarb
Distance Fire Ant Bait – pyreproxifen
Extinguish Fire Ant Bait – methoprene
Maxforce Granular Insect Bait – hydramethylnon
Trimedlure Baskets – use own attractant

Fly Control Products

Aerosols

CDC Mosquito Light Traps

Dispensers

Genesis DFM 32x Micro – Cleansing

Hanging Traps and Lure

Maxforce Fly Bait

Musca – Cide Bait Station

Quikstrike

Stimukil Fly Bait

Yellow Jacket Control

Seabright traps and bait

Sterling traps and attractant

Woodstream Traps & Bait

Organics

Azatrol – azadirachtin

Botanigard – entomopathic fungi

Cinnamite – cinnamaldehyde

Conserve SC – produced by fermentation processes

Dipel – bacteria for caterpillars

Distance IGR – pyriproxyfen

Dormant Oil 415 Spray

Gnatrol – bti, soil drench

Millenium – nematodes

M-Pede – insecticidal soap

Ornazin – azadirachtin

Pyreth-It – pyrethrum

Saf-T-Side – light horticultural mineral spray oil

Sun Spray Ultra Fine Oil

Ultra Pure Oil

Vector Control Products

Adulticides

Eco Exempt EC, IC2 – rosemary, peppermint, wintergreen,
vanillin, mineral oil

Fyfanon ULV – malathion

MasterLine® Aqua Kontrol

MasterLine® Kontrol 2 – 2, 4-4, 30-30, 31-67

M-Pede – insecticidal soap

Natural Py: Pyronyl – pyrethrin, piperonyl butoxide #525, #3610A,
Crop Spray, 303 EC Pyroicide 7192, 5-25 – pyrethrin & pbo

Barrier Treatments

Cy-Kick CS

Demand CS

MasterLine® Bifenthrin 7.9

Mavrik

Microcare CS

Suspend SC
Talstar Pro
Tempo Ultra SC

Larvicides

Altosid – methoprene growth regulator 30 day briquets, pellets,
WSP pellets, XR-Briquets, XR-Ingots, XRG, SBG SR-20
Bactimos Briquets – bti
Teknar HPD – bti

FUNGICIDES & BACTERICIDIN

26/36 – iprodione thiophanate-methyl
3336 EG – thiophanate-methyl
Agrimycin – agrimycin
Alude – mono and di-potassium salts of phosphorus acid
Appear – Potassium Phosphite
Arbor OTC – oxytetracycline
Arena 50 WDG, 025G – clothianidin
Armada 50 WDG – Trifloxystrobin, Triadimefon
Banner Maxx – propiconazole
Banol – Propamocarb hydrochloride
Bayleton (Flo, 50) – Triadimefon
Bayleton – triadimefon
Blocker 4F – pcnb
Briskway – Azoxystrobin, Difenoconazole
Camelot – copper salts of fatty and rosin acids
Chipco 26019 Flo or 26GT – Iprodione
Chipco 26GT – iprodione
Chipco Aliette – aluminum tris
Chipco Signature – aluminum tris (with dye)
Chlorothalonil 720 SFT, DF
Cleary 3336 – thiophanate-methyl
Compass 50wg – Trifloxystrobin
Concert II – Chlorothalonil, Propiconazole
Copper Count N – liquid 8% complexed copper
Curalan – vinclozolin
Daconil Action – Acibenzolar-S-methyl, Chlorothalonil
Daconil Weather Stik – chlorothalonil
Decree – fenhexamid
Dithane 75DF Rainshield – mancozeb
Eagle 20EW – propanenitrile
Eco1 – linseed oil, thyme oil, peppermint oil
Eco PM – thyme, clove oil
Emblem/Spirato GHN – fludioxonil
Emerald – boscalid
Empress Intrinsic – pyraclostrobin
Enclave – Chlorothalonil, Iprodione, Thiophanate methyl, Tebuconazole
Exteris Stressgard – Trifloxystrobin, Fluopyryam NOT IN CA

Fame SC – Fluoxastrobin
Fiata Stressgard – Mono- di-potassium salts of phosphorous acid
Fore 80WP Rainshield
Fosetyl-Al 80 WDG – aluminum tris
Fungo Flo – thiophanate-methyl
Gnatrol WDG – bacillus thuringiensis
Headway – azoxystrobin, propiconazole
Heritage – azoxystrobin
Honor Intrinsic – boscalid + pyraclostrobin (turf)
Insignia – pyraclostrobin
Instrata – Chlorothalonil, Fludioxonil, Propiconazole
Interface Stressgard – Iprodione, Trifloxystrobin
Ipro 2SE – iprodione
Kabuto – isofetamid
Kaligreen – organic, potassium bicarbonate
Kocide – copper hydroxide
KDP-Hydroxide – Bactericide / fungicide
Lexicon – fluxapyroxad + pyraclostrobin
Medallion SC, WDG – Fludioxonil
Mefenoxam 2AQ
Micora – Mandipropamid
Minx 2 – abamectin
Mirage Stressgard – Tebuconazole
Myclobutanil 20EW T&O
Orkestra Intrinsic – carboxamide, strobilurin
Orvego – ametoctradin + dimethomorph
Pageant – boscalid + pyraclostrobin (ornamentals)
Palladium – Cyprodinil, Fludioxonil
PhosphoJet – phosphorous acid
Phyton 27 New Dimension – CU S pentahydrate
Propiconazole 14.3
Propizol – propiconazole
Prostar WG – Flutolanil
Prostar – flutolanil
Protect – manganese & zinc
Renown – azoxystrobin, Chlorothalonil
Rhapsody – bacillus subtilis (pseudomonas)
RootShield G – trichoderma harzianum
Rubigan – fenarimol
Safari – dinotefuran
Secure – Fluazinam
Segovis – Oxathiapiprolin
Segway – cyazofamid
Signature Xtra – fosetyl-Al NOT IN CA
Spectro 90 – chlorothalonil, thiophanate methyl
Spotrete F – thiram
Stature DM, SC – dimethomorph
Strobe 2L, 50 WG – Pro-azoxystrobin propiconazole
Subdue Maxx – mefenoxam

Sulfur 80 WDG – organic
Sulphur 90W – micronixed, wettable sulfur
Tartan Stressgard – trifloxystrobin, Triadimefon
Tebuconazole 3.6F
Tekken – isofetamid, tebuconazole
Terrachlor – pcnb
Terracyte – sod. carb. peroxyhydroxide
TM 4.5 (Quali-Pro) – thiophanate methyl
Tebuconazole 3.6F
Trinity – triticonazole
Tristar – acetamiprid
Triton 70 WDG – triticonazole
Velista – Penthiopyrad
Xzemplar – fluxapyroxad
Zerotol – hydrogen dioxide

Green and Organic Products

Herbicides

Avenger – citric oil based herbicide, OMRI
Fiesta – iron HEDTA non-selective herbicide, Green
Suppress – natural fatty acid non-selective herbicide, OMRI
Scythe – fatty acids non-selective herbicide, Green

Insecticides

Sulfur 80 WDG – insecticide/fungicide/insecticide, OMRI
Acelepryn – insecticide, green
Azatrol – insecticide/fungicide plant oil based, OMRI
AzaSol – water based insecticide, 25b exempt and OMRI
Eco-1 – essential plant oils insecticide/miticide/fungicide, OMRI
M-Pede – insecticidal soap, OMRI
Eco Via – food grade plant oil insecticide, 25b exempt
Essentria - line of essential plant oil based insecticide, 25b exempt
IC 3 – essential oils insecticide, 25b exempt
Nature-Cide – essential plant oil insecticide, 25b exempt
DiPel Pro – BTI larvacide/insecticide, OMRI
Ultrapure Oil – mineral oil insecticide/ fungicide, Green
Saf-T-Side – oil based insecticide/fungicide, OMRI
PyGanic – oil based botanical insecticide, OMRI
Conserve – spinosad/insecticide, green
Gnatrol – BTI, larvacide/insecticide
Altosid – IGR, green

Fertilizers

Black Gypsum DG – soil enhancer for salt correction, root growth and nutrient uptake, OMRI
Humic DG – soil enhancer for root growth and nutrient uptake, OMRI
Par 4 – organic base fertilizer, OMRI

CalSul Gypsum – plant food and soil conditioner, green
PelLime – dolomitic/calclitic lime soil conditioner, green
JH Biotech line –
5-1-1 Fish based, OMRI
Westbridge line –
BioLink & Trigger – OMRI and certified organic
Tri-C line
GroPower line
GrowMore line

Fungicides

Sulfur 80 WDG – insecticide/fungicide/insecticide, OMRI

FERTILIZERS & NUTRIENTS

Andersons Brand
BioPro Line
Grow More Brand
Grow Power Brand
J.R. Simplot – Apex and Best Brands
Lebanon Brand
MnJet Fe
Monterey Chemical Brands
Nutrite
Palm-Jet Mg 1-2-2
Plant Health Care – bacteria and mycorrhizal fungi
Roots Inc – all brands
Tri C Brand
Yara Viking Ship Brand

EQUIPMENT

Application

Sprayers/Power Rigs

Mar-Len Supply

50 gallon, 100 gallon or larger aluminum or poly plastic tanks
Briggs and Stratton or Honda engines
Diamond pumps – triplex piston driven
Hannay hose reels
Belt driven or direct linkage from pump and motor
Cart sprayers – 15 or 20 gallon

GNC Sprayers

50 or 100 gallon tanks
Poly tanks
Hypro pumps
Hannay hose reels

Backpack Sprayers

Birchmeier
B&G Equipment Company
SP Systems – battery powered or hand pumped
Green Garde/Hudson
MasterLine® 4 gallon backpack
Solo

Spray Guns and Gunjets

Green Garde/Hudson – JD-9C, flooding nozzles, root injection attachments
Mar-Len Supply – GES-505
MasterLine® MG – 1 Gunjet
Spraying Systems – brass or aluminum

Hand Held Sprayers

Stainless Steel:
B & G Equipment Co. 1, 2, or 3 gallon
Hudson/Green Guard

Tree Injection

F Series Tree IV line
Quik-Jet Air Kit
Quik-Jet Kit
Tree IV

All Parts/Accessories

Thermal Foggers

Curtis Dyna-Fog
Electric
Piston engines
Pulse jet engine

London Foggers

ULV Applicators

Curtis Dyna-Fog
Wind Driven (Cold Fog)
Air Driven (Cold Fog)
Electric Cold Fog
Pulse-Jet Thermal Mist
Piston Engine ULV (Cold Fog)
Truck Mount ULV

London Foggers

Hydraulic Sprayers

Stainless pump – up sprayers
Poly pump – up sprayers
Poly dual – action trigger sprayers
360 GPH spray rig



Spreader: Granule

Spyker

- Belly Spreaders #75
- Electric/Mounted #220
- Pull Behind #299
- Push Behind #288, #46

Handy Green Spreader

SP Systems

Curtis Dyna – Fog



MISCELLANEOUS

Rodent Control

Rats and Mice

A complete line of rodent control products is available from the following manufacturers:

- Advantage Products
- Bell Laboratories
- Catchmaster (AP&G)
- JT Eaton
- Kness
- Liphatech
- MasterLine®
- Syngenta
- Victor Woodstream
- VM Products

Gophers, Ground Squirrels, Voles and Moles

- Answer for Pocket Gophers – anticoagulant
- Contrac – bromadiolone
- Fumitoxin – aluminum phosphide fumigant
- Mole Med – repellent
- Phostoxin – aluminum phosphide fumigant
- Rozol Ground Squirrel Bait – chlorophacinone
- Rozol Pocket Gopher Bait – anticoagulant
- Talprid – rubber earthworms, bromethalin
- Wilco Gopher – type 1, type 2 and AG
- ZP Rodent Bait Ag – zinc phosphide

Traps and Bait Stations

- Attaching & anchoring devices for bait stations
- Enclosed cover & tunnels for glue traps
- Glue traps & bulk glue
- Gopher Getter Bait Applicator
- Havahart Traps – live trap cages
- Kage – All-live trap cages
- Labels for bait stations
- Live traps



Rodenticide bait stations – tamper & non-tamper resistant stations

Snap traps

Victor Gopher Trap – Easy-Set wire trap

Victor Mole Trap – Out O' Sight clamp style

Victor Mole Trap – plunger style

Other Vertebrate Pests

Birds – a full line of bird control materials from Bird Barrier, Inc., includes netting, wires, decoys, metal & plastic strips, all installation materials

Snake Guard – snake glue trap

Animal Repellents

Deer Scram

Havahart Mole Repellent

Havahart Squirrel Repellent

Hot Sauce

Mole Scram

Rabbit Scram

Ropel – Pet Animal Repellent – bittering agent, deer, beavers, woodpeckers

Grass Seed

Lebanon Trifecta Perennial Rye

Lebanon Winning Colors Tall Fescue

Pennington Summer and Winter Seed

Seed Research Brand Grass Seed

Snail and Slug Control

Deadline (bullets, MPs, T&O) – metaldehyde

Durham (3.5 and 7.5%) – metaldehyde

Measurol – methiocarb

Sluggo – iron phosphate

Adjuvants & Surfactants

Audible 80

Audible 90

AquaT – pond bacteria (restore pond)

Back Field

Break – Thru Surfactant

Can – Hance – mso

CMR Silicone Surfactant

Completion

Convey

GelTrack – keep dust down

Hydretain – soil moisture retention

K-90 – non-ionic adjuvant, spreader, activator

Latron B – 1956 – spreader, sticker

Magnify Activator – ammonium salts, alkyl polyglucoside, dimethylpolysiloxane, activator/penetrator, terrestrial & aquatic

Motion

MSO Gold-100 – Methylated Seed oil

Nalco – Trol-drift control for use with pesticides other than Roundup or Sevin

Na-X Salt Flush – soil conditioner

No Foam A – non-ionic spreader, activator

No Foam B – spreader, activator, buffer

PAS-800 – Non – Ionic Surfactant, Acidifier

Pentra Bark – bark penetrating surfactant

Reverse

Rocket – monobutyl ether, spreader/activator/enhancer, terrestrial & aquatic use

Sea-Xtra – wetting agent and nutrients

Scrimmage

Sil-Fact – Organosilicone for Bark Banding

Transfilm – anti-transpirant

Tripleline Foam Away – defoamer, non-ionic

Umbrella – alkylaryl polyethoxyethanois, spreader, sticker, extender

Yardage

Yuccah – wetting agent

Dyes and Colorants

Aquashade Aquatic Dye

Blazon Blue Dye

Green-Dura

Green Lawngr

Greenzit

Mark-It – Blue

Monterey H2O Blue – water shade colorant

Turf Mark Blue

Cleaners, Spill Control, Deodorizers

Cleary Tank Cleaner

Commando Spill Kit

Earthcare – odor remover in bags or granules

Epoleon – deodorizer

E-Z Sorb – absorbent for chemical spills

Green-Shield CA – disinfectant and algaecide

Kalo Tank Cleaner

Nokomis 3 – tank and equipment cleaner

Nutra – Sol Tank Cleaner

Odor Hunter

Onside Kick

Play Off

Physan – disinfectant and algaecide

Soak Up – absorbent for chemical spills

Univar carries a complete line of all necessary equipment such as:

- Bee and wasp suits, gloves, helmets and hoods
- Disposable coveralls
- Emergency spill kits
- Eye protection – safety glasses, goggles, face shields
- Eye wash bottles
- First aid kits & Flashlights
- Gloves & Hand cleaners
- Head & Rain gear
- Respirators and dust masks – fit test kits, replacement parts
- Signs
- Storage units



ADJUVANT GUIDE

| Adjuvant Type | Exacto® Inc Products | Product Features | Compares To |
|--|--|--|--|
| Spreader-Sticker (NIS) | Audible™ 80 Audible™ 90 | <ul style="list-style-type: none"> • Both Audible™ 80 and 90 are formulated with defoamer and fulfill active label requirements for 80 or 90% surfactant load • Lower use rates • Humectant qualities | NO FOAM A Surf-Ac® 820 Chemsurf™ 80 or 90 Lesco-Wet™ Plus |
| Organosilicone (OSS) Spreader-Sticker (NIS) | Scrimmage™ | <ul style="list-style-type: none"> • Super spreader characteristics • Lower use rates • Improves fast penetration and rain fastness • Not for use in over 90° temperatures | Silkin® |
| Modified Vegetable Oil Concentrate | Motion™ | <ul style="list-style-type: none"> • Modified seed oil for use with herbicides like Grass Getter® or Drive® (quinclorac) • Rapid penetration • Slows drying • Good in injection irrigation | Herbicide Helper MSO |
| Water Conditioner | Completion™ | <ul style="list-style-type: none"> • Prevents active ingredient breakdown in hard or mineral saturated water • Acidifies mixing water • Contains AMS | Speedway® Conform™ |
| Sticker | Back Field™ | <ul style="list-style-type: none"> • Improves adhesion and duration of pesticide applications | Nu-Film® |
| Defoam and Antifoam | Reverse™ | <ul style="list-style-type: none"> • Prevents foaming while mixing and knocks down foam during application • Does not affect active ingredient effectiveness | Recede™ |
| Turf and Divot Sand Colorant | Green-Dura | <ul style="list-style-type: none"> • May be applied to growing or non-growing grass • Improves color • Tints divot repair sand | Green Lawnger® |
| Tank and Equipment Cleaner | Onside Kick™ | <ul style="list-style-type: none"> • Ammoniated liquid cleaner for all application equipment • Helps to prevent cross contamination | LESCOSol™ |
| Multi-functional NIS, Penetrant, Acidifier, Drift Reduction and Deposition | Yardage™ | <ul style="list-style-type: none"> • Lowers pH to condition mixing water • Lecithin drift control limits driftable fines • Improves penetration through waxy cuticles • Efficient spreader-wetter for increased uniform coverage | LI 700® Magnify |
| Specialty Nonionic Surfactant (NIS) | Convey | <ul style="list-style-type: none"> • Spreader-sticker that does not strip protective leaf waxes • Use with PGR's and antibiotics like streptomycin | Regulaid® |
| Scent Masking | Play Off™ | <ul style="list-style-type: none"> • Wintergreen scented odor masking agent for all tank mixes. • Mixes well with most tank solutions • Does not affect pesticide efficacy • Disguises unpleasant pesticide application odors | Odorscent |

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CALIBRATIONS

Calculating the Percent Active in Dilutions

Sometimes it is necessary to know what percentage of active ingredient is in a dilution. To calculate this you need to know the volume of the spray tank, the weight of active ingredient per gallon of formulation, the weight of a gallon of water, and the number of ounces in a gallon. The weight of water is constant—approximately 8.34 pounds.

Assume the spray tank measures 50 gallons. You are trying to determine the percent active in a dilution containing 30 ounces of Malathion 57E in 50 gallons of water. Malathion 57E contains 5 pounds of active ingredient per gallon.

1. Find how much active ingredient by dividing 30 ounces into 1 gallon (128 oz) and multiplying by 5 lbs./gallon.

$$\frac{30 \text{ oz.} \times 5 \text{ lbs./gallon}}{128 \text{ oz./gallon}} = 1.17 \text{ pounds active}$$

2. Find the percentage of active ingredient by dividing 1.17 lbs. by 50 gallons of water and then divide by the weight of water (8.34 lbs./gal.)

$$\frac{1.17 \text{ pounds active}}{50 \text{ gallon} \times 8.34 \text{ lbs./gallon}} = .0028 = 0.28\%$$

Therefore, this dilution of 30 ounces of Malathion 57E in 50 gallons of water will contain 0.28% Malathion.

Calculating a Percent Solution with a Liquid Formulation

To prepare a percent solution using liquid formulations, you need to know the volume of the spray tank, the weight of active ingredients per gallon of formulation and the weight of a gallon of water. The weight of water is a constant—approximately 8.34 pounds. Assume you have measured the volume of the spray tank and find that it holds 100 gallons of water. You are given a recommendation to apply a 1% solution of glyphosate for control of aquatic weeds using a high pressure sprayer with a handheld spray nozzle. The formulation of glyphosate that you are to use contains 5.4 pounds of active ingredient per gallon.

1. Find the total weight of the liquid in the filled tank by multiplying 100 gallons by 8.34 pounds per gallon.

$$100 \text{ gal.} \times 8.34 \text{ lb. / gal.} = 834 \text{ lbs.}$$

2. Multiply this weight by 0.01 (1%) to determine the weight of active ingredient required to mix a 1% solution.

$$834 \times 0.01 = 8.34 \text{ lb.}$$

3. Divide the required weight of active ingredient by the weight of active ingredient in the formulation. The result is the number of gallons of liquid formulation that should be added to 100 gallons of water to achieve a 1% solution.

$$\frac{8.34 \text{ lbs. a.i.}}{5.4 \text{ lbs. a.i./gallon}} = 1.54 \text{ gallons Formulation}$$

In this example, one tank of liquid should contain 1.54 gallons of glyphosate formulation. The total volume of water combined with the glyphosate formulation should equal 100 gallons, the capacity of the tank. You would therefore use 98.46 gallons of water and 1.54 gallons of formulated glyphosate.

Useful Conversion Factors for Calibrations:

Standard Measures

Length:

$$1 \text{ ft} = 12 \text{ in}$$

$$1 \text{ yd} = 3 \text{ ft}$$

$$1 \text{ mi} = 5,280 \text{ ft}$$

Metric Conversions

$$1 \text{ in} = 25.4 \text{ mm}$$

$$= 2.54 \text{ cm}$$

$$1 \text{ ft} = 304.8 \text{ mm}$$

$$= 30.48 \text{ cm}$$

$$1 \text{ yd} = 914.4 \text{ mm}$$

$$= 91.44 \text{ cm}$$

$$= 0.914 \text{ m}$$

$$1 \text{ mi} = 1,609 \text{ m}$$

$$= 1.61 \text{ km}$$

$$1 \text{ mm} = 0.03937 \text{ in}$$

$$1 \text{ cm} = 0.394 \text{ in}$$

$$= 0.0328 \text{ ft}$$

$$1 \text{ m} = 39.37 \text{ in}$$

$$= 3.281 \text{ ft}$$

$$1 \text{ km} = 3,281 \text{ ft}$$

$$= 0.6214 \text{ mi}$$

Area:

$$1 \text{ sq in} = 0.007 \text{ sq ft}$$

$$1 \text{ sq ft} = 144 \text{ sq in}$$

$$= 0.000023 \text{ sq ac}$$

$$1 \text{ sq yd} = 1,296 \text{ sq in}$$

$$= 9 \text{ sq ft}$$

$$1 \text{ ac} = 43,560 \text{ sq ft}$$

$$= 4,840 \text{ sq yd}$$

$$1 \text{ sq in} = 645 \text{ sq cm}$$

$$1 \text{ sq ft} = 929 \text{ sq cm}$$

$$1 \text{ sq yd} = 8,361 \text{ sq cm}$$

$$= 0.8361 \text{ sq m}$$

$$1 \text{ ac} = 4,050 \text{ sq m}$$

$$= 0.405 \text{ ha}$$

$$1 \text{ sq cm} = 0.155 \text{ sq in}$$

$$= 1 \text{ sq m}$$

$$= 1,550 \text{ sq ft}$$

$$= 10.76 \text{ sq ft}$$

$$1 \text{ ha} = 107,600 \text{ sq ft}$$

$$= 2.47 \text{ ac}$$

Standard Measures

Volume:

1 tsp = 0.17 fl oz

1 tbs = 3 tsp

1 fl oz = 2 tbs
= 6 tsp

1 cup = 8 fl oz
= 16 tbs

1 pt = 2 cups
= 16 fl oz

1 qt = 2 pt
= 32 fl oz

Weight:

1 oz = 0.0625 lb

1 lb = 16 oz

1 ton = 2000 lb

1 gal water = 8.34 lb

Abbreviations:

ac = acre

fl oz = fluid ounce

ft = foot/feet

gal = gallon

sq = square

in = inch

lb = pound

mi = mile

oz = ounce

pt = pint

qt = quart

tbs = tablespoon

tsp = teaspoon

yd = yard

Metric Conversions

1 fl oz = 29.5 ml
= 0.02951 L

1 pint = 437 ml
= 0.437 L

1 qt = 945 ml
= 0.945 L

1 gal = 3785 ml
= 3.785 L

1 L = 33.8 fl oz
= 2.112 pt

= 10.57 qt
= 231 cu in

= 0.264 gal

1 ml = 0.033 fl oz

1 oz = 28.35 g

1 lb = 454 g
= 0.4536 kg

1 ton = 907 kg

1 gal water = 3.786 kg

1 g = 0.035 oz

1 kg = 35.27 oz

= 2.205 lb

cm = centimeter

g = gram

ha = hectare

(1 h = 10,000 sqm)

kg = kilogram

km = kilometer

L = liter

m = meter

ml = milliliter

mm = millimeter

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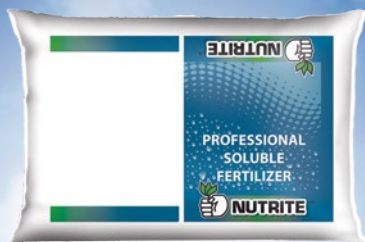
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- 34-0-12 70% UMAXX Sol + Bio-Stim
- 17-5-17 Sol + Bio-Stim
- 13-2-13 Sol + Bio-Stim



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Notes

Dotted lines for taking notes.

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