

UNIVAR® ENVIRONMENTAL SCIENCES

Public Health Products

Univar Environmental Sciences fully supports your vector and mosquito control efforts. In addition to the products highlighted in this catalog, Univar offers countless resources from program consultation to ensuring on-time delivery for every order.



- Providing complementary program consultation and advice.
- Ready with the answers to take care of your unique needs.
- Dedicated to ensure on-time product delivery.



- Full arsenal to meet your needs including: larvicides, adulticides, barrier, and misting products.
- Full line of equipment including foggers, ULV, sprayers, light traps, and misters.
- Extensive MasterLine® Kontrol product line offering exceptional value and proven efficacy.



TECHNOLOGY

- UnivarES.com with access to product info, line cards, training videos and expert advice.
- EZ–Order with products available for convenient online ordering.
- Equipment calibration and testing to ensure successful product application.



EDUCATION

- Training offered online, at Univar Pro Centers, or on-site at your location.
- Online Master Technician courses approved for CEU credits in the majority of the U.S.
- Training classes with key suppliers to train staff on optimal product use.

As your one stop shop for all your vector and mosquito control needs, please call one of the numbers below if you have product questions, to place an order, or learn more about what Univar can do for you:

Domestic U.S.: (800) 609-9414

International: (305) 882-1375

To learn more visit UnivarES.com

Adulticides



DIBROM CONCENTRATE is 87.4% Naled. This organophosphate product gives excellent adult mosquito control in residential areas, municipalities, tidal marshes, swamps, woodlands, and agricultural areas (when applied in wide area public pest control programs). It also is approved for livestock pastures, feed lots and pastures, including dairy cattle.



TRUMPET EC is 78% Naled. Trumpet has all the same great features and benefits as Dibrom Concentrate. However, it has been designed to be rinsed from the spray equipment with water rather than solvent. This is a good choice when your application equipment (aircraft) is used for several different spray programs.





PYROFOS 1.5 ULV contains 1.5 pounds of the active ingredient chlorpyrifos per gallon. It is recommended for application either as a thermal fog or as an ultra low volume (ULV) non-thermal aerosol to control adult mosquitoes in outdoor residential and recreational areas. It may be applied by ground-based or by aerial application equipment.



MasterLine

MASTERLINE AQUA-KONTROL CONCENTRATE is a water dilutable, 20% permethrin / 20% PBO adulticide that can be applied over specific crops including alfalfa and range grasses. It also is approved for treatment of corrals, feed lots, swine lots, poultry ranges, and zoos. This broad spectrum insecticide does not have an EPA water set back requirement and can be used "neat" (undiluted) or diluted, applied ultra low volume (ULV) by air or ground. It can also be applied either as a mist barrier or from a thermal fogger. It requires no special mixing equipment.



MasterLine

MASTERLINE KONTROL 4-4 CONCENTRATE is a 4.6% permethrin / 4.6% PBO low-odor oil formulation that is ready to use and ideally suited for most areas over specific crops, including alfalfa and range grasses. As a non-corrosive, it won't damage cars, trucks or airplanes. Its broad spectrum, superior formulation is clean and clear and provides quick knockdown of most mosquito species as well as other Diptera species such as biting and non-biting midges, black flies and gnats. With no EPA-required water set back, Kontrol 4-4 can be applied ultra low volume (ULV) by air or ground. It can also be applied either as a mist barrier or from a thermal fogger.



MasterLine

MASTERLINE KONTROL 30-30 CONCENTRATE AND MASTERLINE KONTROL 2-2 are oilbased formulations of 30% permethrin / 30% PBO and 2% permethrin/2% PBO, respectively. Both are superior products with broad spectrum application that share the same features and benefits as MasterLine Kontrol 4-4 Concentrate. With no EPA-required water set back, they can be applied ultra low volume (ULV) by air or ground. Both can also be applied either as a mist barrier or from a thermal fogger.



MasterLine

MASTERLINE KONTROL 31-67 CONCENTRATE is a fully loaded oil-based formulation with 31% permethrin / 67% PBO. It is ideal for use in situations with hard to control pests. The additional PBO provides the extra kick, yielding higher knock down. Kontrol 31-67 does not have an EPA water set back requirement and can be used "neat" (undiluted) or diluted, applied ultra low volume (ULV) by air or ground. It can also be applied either as a mist barrier or from a thermal fogger.





CY-KICK CS Exclusive SmartCap Technology creates a shell around the active ingredient, cyfluthrin, that increases residual control by protecting it from UV light, weather, porous, and greasy surfaces and absorption into soil or organic matter. It also acts as a barrier to diminish exposure to humans and pets while reducing plant phytotoxicity and staining. Studies have shown Cy-Kick CS to provide residual control of mosquitoes beyond 90 days. Low phytotoxicity.

Bayer Environmental Science

SUSPEND® SC INSECTICIDE and **TEMPO® SC ULTRA** are non-staining, low odor, and not harmful to plants while providing quick knock down and long residual control when applied to mosquito resting areas.

Suspend[®] SC Insecticide contains Deltamethrin in an easy-to use suspension concentrate formulation extremely effective against mosquitoes at very low rates (0.03 to 0.06%) that is labeled for both indoor and outdoor applications. Tempo[®] SC Ultra contains the active ingredient β-cyfluthrin in a convenient suspension concentrate formulation and is labeled for use where you need it most: as a general spray around landscapes, lawns, and buildings.

TALSTAR® PROFESSIONAL insecticide is a superior choice for use as a barrier treatment for control of urban mosquitoes and ticks. Additionally, it provides long-lasting control of over 75 other pests, including ants, termites, cockroaches, spiders, bed bugs, and fleas. And with its flexible label, Talstar Professional is approved in multiple use-sites, so you can use it almost anywhere: indoors and out, in industrial, commercial, and food-handling areas. With its broad label and dependable efficacy, Talstar

Professional has been expertly formulated to help you get the job done right every time.





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TMC

MASTERLINE BIFENTHRIN 7.9 is a broad spectrum pyrethroid product with superior residual that creates a long lasting barrier against mosquitoes. MasterLine Bifenthrin 7.9 is also less irritating and longer lasting than many other pyrethroids. It is a flowable formulation that can be diluted up to .12% and can be easily applied with a conventional sprayer or misting sprayer in both residential and commercial settings. It is a proven low-odor, non-irritating product that will give you superior results.

MGK

ONSLAUGHT® MICROENCAPSULATED INSECTICIDE is 6.4% esfenvalerate with residual mosquito control. Microencapsulation protects the active from environmental factors, minimizes plant phytotoxicity and reduces potential irritation to applicators. Can be applied to turf, ornamentals, and landscapes for residual outdoor mosquito control.

NYGUARD® IGR CONCENTRATE is a 10.3% pyriproxyfen, an insect growth regulator (IGR) that acts on immature and adult life stages of mosquitoes. High performance and low impact. Photostable and can be used to control mosquitoes on outdoor surfaces as well as in standing or stagnant water in backyards (*not active waterways such as rivers or ponds*). Mosquito larvae exposure to NyGuard inhibits the emergence of adult mosquitoes.

syngenta

DEMAND CS's active ingredient, lambda-cyhalothrin, is enclosed within microcapsules which protect it from environmental factors that may lessen its effectiveness. Demand CS provides effective control of a wide-range of adult mosquitoes in open areas including black salt-marsh mosquitoes, common malaria mosquitoes, salt-marsh mosquitoes, and southern house mosquitoes.



MAVRIK® PERIMETER is an excellent tool for use as a barrier treatment in commercial and residential mosquito control service. It is a broad-spectrum pyrethroid that controls an array of pests that infest areas outside of residential and commercial buildings.

Larvicides







MASTERLINE® KONTROL MOSQUITO LARVICIDE is 98% mineral oil/2% active designed for surface application to intermittently flooded areas, temporary rain pools, sloughs, log ponds, and other areas where mosquitoes may develop. It is specifically formulated for enhanced spreadability to control/suffocate larva and pupa before they become biting adults. It may be used all season long and does not depend on life cycle timing for effectiveness.

Provect

PROVECT gives you a choice in time-tested Temephos larvicides. ProVect brand Temephos from AllPro is now available through Univar USA in a variety of formulations and your choice of carrier to best suit your application needs.

ProVect makes Temephos easier than ever to apply. Used worldwide in mosquito abatement programs since 1965, Temephos remains the gold standard of mosquito larvicides. Our new micro-prill carrier is less abrasive than sand, more free-flowing than other formulations and is virtually dust-free. The spherical shape penetrates through dense foliage and readily dissolves in water.



eknai

BIOLOGICAL LARVICIDE

Summit Chemical Co.

B.T.I. BRIQUETS are floating sustained-release larvicide for the long-term control of mosquitoes. It controls mosquito larvae within 48 hours of application. Effective against 1st through 3rd Instar Larvae. These briquets may be used in all types of mosquito breeding areas. Summit Chemical Co. B.T.I. Briquets are formulated to release effective levels of Bti for a period of 30 days or more under typical environmental conditions.

Apply 1 Briquet per 100 sq. ft. of surface area.



TEKNAR SC is a high potency liquid Bti larvicide for mosquitoes and Blackfly control. Teknar SC may be applied to any water sites except treated, finished drinking water reservoirs or drinking water receptacles. Teknar SC is cost effective in habitats that tend to produce single broods of larvae upon flooding.

For granular Bti Larvicide, consider Teknar G. It is ideal to use in areas where a granular formulation is needed to reach the target site, such as roadside ditches, woodland pools, pastures, salt marshes, rice fields, storm water retention areas, and catch basins.





ALTOSID LARVICIDE is the best way to combat mosquitoes and the health risks they spread by eliminating the mosquito larvae that breed in standing water.

Available in multiple formulations, Altosid[®] controls mosquito larvae before they can develop into troublesome adults. Altosid[®] contains (S)-Methoprene, an insect growth regulator (IGR) that stops mosquitoes from becoming breeding, biting adults. Altosid[®] is target-specific, and will not affect fish, waterfowl, mammals or beneficial predatory insects.

To order call (800) 609-9414 or visit UnivarES.com

Not all products are available at all locations. Not all products are registered in all states.





Foggers/ULV





CURTIS DYNA-JET® L-30

Atomizer Type: High-speed rotary atomizer constructed of a safe high-density polyethylene (HDPE) material and precision balanced in 2-planes. (Atomizer dust cover and balanced spare atomizer assembly included) Atomizer Motor: 12 volt DC, brushless, high-speed shielded bearings.

Articulating Head: Power assisted adjustment of 55° (Vertical) and manually of 180° (Horizontal) via patented remote control.

Blower Motor: High-output 1,350 cu. feet/minute (38.2 cu. meters/minute)

Pumping System: Positive displacement, FMI ceramic piston pump, stainless steel housing (0-20 oz/min, 0-591 ml/min), formulation anti-pulsing system (FAPS), tamper-resistant cover

Formulation Tank: 15 US gallon (57 Liter), translucent HDPE with lockable cap.

Flush Tank: 1 US gallon (3.8 Liter), translucent HDPE

Standard Battery: 12 volt high-performance Optima AGM Spiralcell Marine Deep Cycle, 120 minute reserve capacity.

Remote Control: Machine on/off, Spray on/off, formulation/flush selector, blower angle adjustment, digital battery meter with color LED bar graph, accumulative hour meter and backlit for night operations. **Machine Weight (empty):** 105 lbs. (47.6 kg)



CURTIS DYNA-FOG TYPHOON™ I MODEL 2984

Engine: 9 HP Briggs & Stratton Blower: 200 CFM (5.6m3/min) Rotary, Positive Displacement Direct Drive Nozzle: Single High Output MultiMist,[™] 360° Adjustable Pumping System: Diaphragm 0-128 oz (3.8 l) / min, FMI 0-18 oz (532 ml) / min, Gear 0-20 oz (600 ml) / min Remote Control Features: Diaphragm / FMI: Spray on/off, Machine on/off, Engine Start Gear: Spray on/off, Flush on/off, Machine on/off, Engine Start, Automatic Choke, Variable Output, Digital Display of flow rate and vehicle speed Tank Capacities: Formulation 15 US gallon (57 l); Flush 1 US gallon (3.8 l) Machine Weight (empty): 297 lbs (135 kg)



CURTIS DYNA-FOG TYPHOON™ II MODEL 2985

Engine: 11 HP Honda Blower: 200 CFM (5.6m3/min) Rotary, Positive Displacement Direct Drive Nozzle: Two High Output MultiMist,[™] 360° Adjustable Pumping System: Diaphragm 0-128 oz (3.8 l) / min FMI 0-18 oz (532 ml) / min, Optional Pressurized Tank with flowmeter for export only Remote Control Features: Diaphragm / FMI: Spray on/off, Machine on/off, Engine Start Tank Capacities: Formulation 15 US gallon (57 l); Flush 1 US gallon (3.8 l) Machine Weight (empty): 297 lbs (135 kg)



CURTIS DYNA-FOG MINI-LITE

Dyna-Fog Mini-Lite is one of the lightest, handiest and least expensive ULV applicators in the world. **Engine:** 2 cycle, 40 cc 1.8 HP **Blower:** 95 CFM Rotary, 3 stage **Nozzle:** Single high output MICROTEC nozzle **Tank:** Formulation: 1.25 gallon **Fuel:** 33 oz.

CURTIS DYNA-FOG GOLDEN EAGLE XL 2610

Dyna-Fog Golden Eagle electric start is unsurpassed in its Thermal Fogging capabilities. It is an ideal fog generator for large indoor warehouses as well as a powerful chemical applicator for large outdoor pest control. Engine: 30 HP/hr Formulation Output: 0-9 gal/hr Tank: Formulation: 1.1 gallon Fuel: 1.2 quarts



CURTIS DYNA- FOG TWISTER

Dyna-Fog Twister XL is a backpack aerosol generator designed to be portable and take the weight off the operator's hands and wrist. Engine: 2 cycle, 40 cc, 1.8 HP Blower: 95 CFM Rotary, 3 stage Nozzle: Single high output MICROTEC nozzle Tank: Formulation: 1 gallon Fuel: 33 oz. Weight: 28 lbs

Foggers/ULV



London Foggers

LONDON FOG 18-20 HIGH OUTPUT ULV MACHINE

Model 18-20 surpasses most other foggers for two important reasons: First, a newgeneration overhead, V-twin cylinder engine (with throttle down feature) produces fewer emissions, consumes less fuel, and has longer service intervals than conventional 'L' head engines. Second, our Triple-V Belt Drive feature reduces blower RPM more than 25%. This design extends blower life and creates a quieter operating fogging machine. The 18-20 produces the correct particle size to meet insecticide label requirements at vehicle speeds up to 20 miles per hour.

Model: 18-20 High Output ULV Aerosol Generator Engine: 18 HP overhead valve, V-twin cylinder, electric start and choke Formulation Pump: 12 Volt DC adjustable output, positive displacement, 0-20 oz./min. Particle Size: 80% of droplets are less than 20 micron resistant Formulation Tank: 15 gallon (56 liters), corrosion resistant Fuel Tank: 7.5 gallons (28.38 liters) with gauge Flush Tank: 1 1/2 quart (1.58 liter), corrosion resistant Blower: Rotary, positive displacement, up to 356 CFM Length: 37" (94 cm) Height: 39" (99 cm) Width: 46" (117 cm) Weight: 445 lbs. (202 kg)



LONDON FOG XKE - LARGE AREA COVERAGE ULV Engine: Kohler Command 8.5 HP OHV Engine w/ Electric Start

Air Compressor: 4 cylinders positive displacement Formulation Pump: Electric, positive displacement, adjustable output

Formulation Output: 0-18 ounces per minute Formulation Tank: 15 gallons (56.7 liters) corrosion resistant polyethylene

Particle Size: 80% of droplets are less than 20 microns in diameter

Nozzle: All metal, 360 degree swivel with solenoid shut off Length: 38" (97 cm) Weight: 280 lb (127 kg) Width: 33" (84 cm) Height: 31" (79 cm) Model Number: #8621



LONDON FOG MAG – MEDIUM AREA ULV

Engine: 3.5 HP, 4 cycle, recoil start, Briggs and Stratton Fuel Tank: 0.5 gallons (1.89L) gasoline Compressor: two cylinder, single stage, heavy duty Operating Pressure: 90-100 PSI Formulation Tank: 2 gallons (7.57L) Formulation Output: 0-6 oz/min (0-295 ml/min) Formula Metering: Various orifice discs, 4 sizes included Particle Size: 80% less than 20 microns Nozzle: Single directional nozzle on swivel Weight: 110 pounds dry (49.88 kg) Shipping Weight: 125 pounds (56.68 kg) Length: 29" (73.6 cm) Height: 19" (48.3 cm) Width: 18" (45.7 cm) Model Number: #8641



LONDON FOG COLT - PORTABLE ULV

Engine: Gasoline, 2 cycle Fuel Tank: One Quart, (.95 liters) gasoline/oil mixture **Compressor:** Rotary, oil-less, 100% ball and roller bearing **Formulation Tank:** One quart, 32 ounces (.946 L) Formulation Output: 0-4 oz/minute (0-118 cc) Formula Metering: Various orifices discs - 3 sizes included Particle Size: 90% less than 15 microns Weight: 19 pounds dry (8.6 kg) Length: 14" (35 cm) Width: 11" (28 cm) Height: 12" (30 cm) Model Number: #8675 Federal Stock Number: NSN 3740 01 456 2622

LONDON FOG F 500-E

Engine: 16 HP Kohler Heavy Duty One cylinder - 4 cycle Formulation Pump: Patented 2-stage turbo rotor fogging system Formulation Tank: One gallon float tank Formulation Output: 30 to 40 gallons per hour (110-135 liters) Formula Metering: Orifice cap Fuel Tank: 1.5 gallons (11.4 litres) Weight: 220 lbs (100 kg) Shipping Weight: 255 lbs (115.6 kg) Length: 33" (84 cm) Width: 30" (76 cm) Height: 23.5" (59 cm) Model Number: #8201

LONDON FOG ELIMINATOR -PORTABLE FOGGER

Engine: Tecumseh, 2 cycle, gasoline manual recoil Formulation Pump: Patented two-stage turbo rotor Formulation Tank: One gallon (3.8 liters) Formulation Output: 5-6 gallons per hour (19-23 liters) Formula Metering: Factory calibrated flow control Fuel Tank: One quart (.95 liters) gasoline Weight: 24 lbs dry (10.9kg) **Length:** 25" (63.5 cm) **Width:** 10.5" (26.5 cm) Height: 20.5" (52 cm) Model Number: #8100 Federal Stock Number: NSN 3740 01 456 2625





Misting





PYSTOL® MISTING CONCENTRATE contains natural pyrethrins for quick knockdown. PYSTOL controls fleas, flies, and mosquitoes for application with residential and barn misting systems. 2.5 gallons makes 55 gallons of misting solution.

VECTOR-BAN™ is a long-lasting premises and misting concentrate that provides knockdown, broad-spectrum insecticidal effectiveness and excellent residual activity for up to 28 days. For residential and barn misting systems.

VECTOR-BAN[™] PLUS is an extremely versatile synergized concentrate for use in misting systems and general pest control indoors and outdoors. Controls mosquitoes, flies, gnats, wasps, leas, ticks, cockroaches, spiders, and other nuisance insects. ½ gallon makes 55 gallons of misting solution.



MGK[®]

RIPTIDE® WATER-BASED PYRETHRIN ULV is an optimized formulation specially designed to deliver fast knockdown and kill of mosquitoes when used in residential misting systems. Riptide's optimized ratio of Pyrethrum and PBO (1:5) effectively controls mosquitoes and other flying insects. Riptide's polymeric waterbased technology is designed for stability in misting system and is easy on landscape plants.

SECTOR® MISTING CONCENTRATE is a water-based insecticide designed for misting systems. Sector's unique formula combines Permethrin with PBO for a higher level of performance. Sector provides knockdown, kill, and residual control of the toughest flying insect problems, including mosquitoes or hard-tokill insects such as gnats, biting midges and no-see-ums. Sector's polymeric waterbased technology is designed for stability in misting system and is easy on landscape plants.

VAMPYRE® MISTING CONCENTRATE features the highest performing ratio of Pyrethrum to PBO (1:10) available and delivers the fastest knockdown and kill of a broad range of insects. VamPyre is ideal for hard-to-kill insect species such as stable flies, horse flies, face flies, deer flies, house flies, mosquitoes (including the Culex species that may carry the West Nile Virus), and gnats. VamPyre's unique microemulsion formulation is stable in solution and is easy on ornamental plants.







MIST-A-WAY SYSTEMS is the leading manufacturer of outdoor misting systems for control of mosquitoes, spiders, no see 'ems and other annoying insects. The systems offer an excellent platform for creating a new and profitable multi-year relationship with your customer. MistAway's innovative technology sets the industry standard with agitation, leak detection, and anti-siphon capabilities.

Equipment





Buffalo Turbine in action



BUFFALO TURBINE CSM2 is a powerful, quiet, and versatile Turbine Mist Sprayer capable of pushing most liquids 100-150 feet vertically and effective horizontal distances of 300 feet. It is powerful enough to penetrate through thick vegetation and tree canopies. Like all of the Buffalo Turbine products, the Model CSM2 is easy to operate, easy to maintain, and is designed to save you time and reduce labor cost. The Model CSM2 is an excellent choice for large area Barrier Spray treatments. With the optional 4 cu. ft Dust/Granular Bin you can also apply granular insecticide materials, pellets, seed, or fertilizer up to 100 feet or more.

Engine: 23 hp Kohler with electric start Output: Up to 10,000 cfm at 175 mph Pump: Hypro twin piston – 10 gpm / 400psi Tank: 50 gallon stainless steel with 2" fill tube & sight glass Weight: 650 lbs. Length: 66"(w/ nozzle assembly) Height: 40" Remote Cab Control: Operates off/on, throttle and nozzle assembly

CURTIS DYNA-FOG[®]Ltd.

quick-change catch jar and durable net with tie strings.



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Model 2503 Ultraviolet P/N# 20586-3

Model 2504 Incandescent P/N# 20586-2







SENTINEL™ GIS is your complete solution for recording and managing data critical to controlling mosquitoes. This easy-to-use package features mobile GIS solutions for mosquito control, automated synchronization between the desktop GIS and field mobile devices, and supervisory tools for customizing and maintaining workflow processes. Sentinel GIS offers four application modules for Larviciding, Adulticiding, Surveillance, and Service Request. The Sentinel Adulticiding module is compatible with some Curtis Dynafog and London Fogger ULV equipment. Sentinel is developed and supported by Electronic Data Solutions, Jerome, ID.

UV LIGHT TRAP MINIATURE (MODEL 2503) AND MINIATURE MOSQUITO LIGHT TRAP (MODEL 2504) are patterned after the light trap originally developed by the United States Center for Disease Control. They are constructed using heavy-duty, corrosion-resistant materials for durability and long life. The high-intensity incandescent or ultraviolet illumination provides maximum mosquito and sand fly attraction. Four-blade, high-flow fan provides excellent downdraft at speeds over 2500RPM with minimum energy use. Includes easy-to-program, four-function logic system with photocell control,



solo Mister 451 has a new 66.5 cc engine with nickel/silicon carbide cylinder coating to generate a fan air volume of max. 824 cfm for total plant penetration. Increased engine performance converts to higher misting performance. With its 3 gallon chemical tank and large 0.5 gallon fuel tank and low fuel consumption it can be operated 80+ minutes before refueling. Starts easy and runs quiet with comfortable backpack carrying frame. It is an excellent choice for residential or large commercial barrier control treatments.





MAXIMUM CONTROL. OPTIMUM FLEXIBILITY.

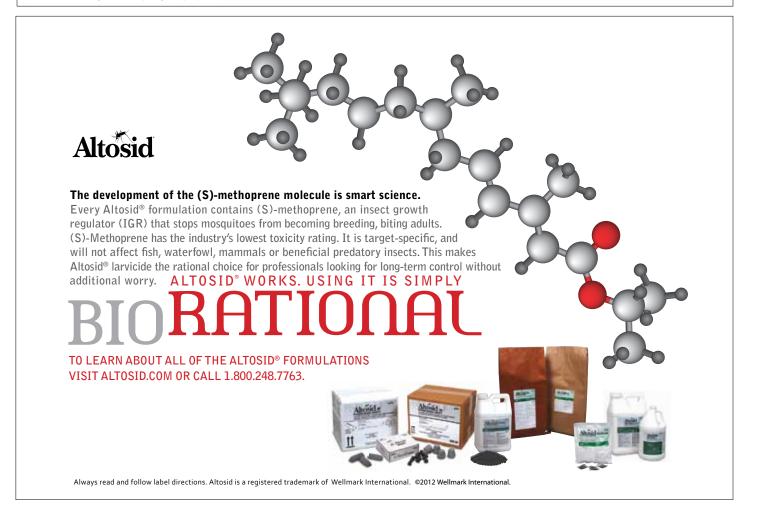
Successful misting companies count on MGK[®], the leader in misting insecticide solutions and technology, to achieve maximum control and optimum flexibility. **Riptide**[®] and **VamPyre**[®] contain the botanical insecticide pyrethrum for fast knockdown and kill of mosquitoes and other flying insects. And **Sector**[®] provides a powerful solution to even your toughest flying insect problems. Best of all, every product in our M.I.S.T. lineup is backed by MGK's unmatched in-field service and support.



MGK

Quality Insect Control Products Since 1902 www.MGK.com

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Pyrofos 1.5 ULV

VECTOR CONTROL INSECTICIDE

VECTOR CONTROL MADE EASY!

 PyroFos 1.5 ULV can be used in residential areas, recreational areas, and other non crop areas for control of adult mosquitoes

 Apply as an ultra low volume (ULV) non-thermal aerosol, or as a thermal fogging agent by ground or aerially

 PyroFos 1.5 ULV is effective on species of mosquitoes that are resistant to synthetic pyrethroids

For more information on PyroFos 1.5 ULV please contact your local Univar Sales Representative for more information about this & other top quality Control Solutions, Inc. products.

CONTROL SOLUTIONS Incorporatod



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UNIT CONVERSION AND CALIBRATION FORMULAS

Unit Conversion

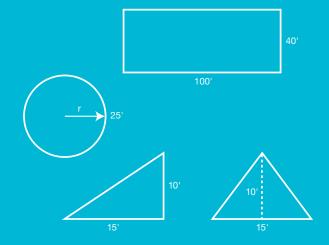
Example

One acre = 43,560 square feet	1/2 acre = 21,780 square feet
One mile = 5,280 feet	
One gallon = 128 fluid ounces	1/2 gallon = 64 fluid ounces
One quart = 2 pints = 4 cups = 32 ounces	2 quarts = 64 fluid ounces
One pint = 2 cups = 16 fluid ounces	1/2 pint = 1 cup = 8 fluid ounces
One tablespoon = 3 teaspoons = .5 fluid ounces	2 tablespoons = 1 fluid ounce
One pound = 16 ounces	
One gallon = 231 cubic inches	2 gallons = 462 cubic inches

Area and Volume Calculations

Area of Rectangular or Square Shape: (Length) x (Width) = Area 100 feet x 40 feet = 4,000 square feet

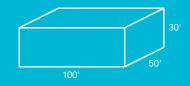
Area of Circle: (Radius) \times (Radius) \times (3.14) = Area 25 feet \times 25 feet \times 3.14 = 1,962.5 square feet

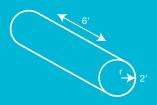


Area of Triangular Shape: $(1/2) \times (Base Width) \times (Height) = Area 1/2 \times 15$ feet x 10 feet = 75 square feet

Area of Irregular Shape: Irregularly shaped sites can often be reduced to a combination of rectangles, circles and triangles. Calculate the area of each shape and add the values of the individual areas to obtain the total area.

1/2 circle rectangle square triangle





area in 10 or more increments. Average these measurements to find the radius, then calculate the area using the formula for a circle.

Another method for calculating the area of an irregular shape is to convert the site into a circle. From a center point, measure the distance to the edge of the

Volume of Cube or Box Shape: The volume of a cube or box is found by multiplying the length, times the width, times the height.

Volume of Cylindrical Shape: The volume of a cylinder is found by calculating the area of the round end (see formula for circle) and multiplying this area times the length or height. (Radius) x (Radius) x (3.14) = Area of Circle (Area of Circle) x (Length) = Volume of Cylinder (2 feet) x (2 feet) x (3.14) x (6 feet) = 75.36 cubic feet

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