IMIDACLOPRID | GROUP 4A INSECTICIDE

MIDAC® FC

Insecticide

Active Ingredient: **By Wt**

Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-*N*-nitro-2-imidazolidinimine 18.5%
Other Ingredients:.....81.5%
Total: 100.0%

This product contains 1.7 pounds of active ingredient per gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

See inside booklet for additional Precautionary Statements and Directions for Use.

EPA Reg. No. 89118-9

Liquid fertilizer compatible

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.

Note to Physician:
This product is a neonicotinoid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

EMERGENCY INFORMATION
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In the event of a medical or chemical emergency contact Chemtel Inc. in North America at 1-800-255-3924 or worldwide international at +1-813-248-0585

Net Contents: 2.5 Gallons

Vive Crop Protection Inc.
500 Westover Dr. #10198
Sandford, NC 27330
1-888-760-0187

2023-10-20

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Caution. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves made of: barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinylchloride (PVC) ≥14 mils or viton ≥14 mils.
- Shoes plus socks.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users Should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This pesticide is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging in the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

PROTECTION OF POLLINATORS

APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.
Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications.
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

Physical or Chemical Hazards

Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

See individual crops for specific pollinator protection application restrictions. If none exist under the specific crop, for foliar applications, follow these application directions for crops that are contracted to have pollinator services or for food/feed & commercially grown ornamentals that are attractive to pollinators:

For Crops Under Contracted Pollination Services

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met:

If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

For Food Crops Not Under Contract for Pollination Services But Are Attractive To Pollinators

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset.
- The application is made to the target site when temperatures are below 55°F.
- The application is made in accordance with a government-initiated public health response.
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements in this labeling about personal protective equipment, restricted-entry intervals, and notification to works. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Do not enter or allow worker entry into treated areas during the restricted entry interval **(REI) of 12 hours**.
Exception: if the product is soil-injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Coveralls.
- Shoes plus socks.
- Gloves made of: barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinylchloride (PVC) ≥14 mils or viton ≥14 mils.

RESTRICTIONS:

- Do not apply to plants grown in non-soil media such as perlite, vermiculite, rock wool or other soil-less media, or plants growing hydroponically.
- Do not apply more than 0.5 lb imidacloprid per acre per calendar year regardless of formulation or method of application, unless specified within a crop-specific section for a given crop.
- Do not apply Midac FC on crops grown for seed.

MIXING AND LOADING REQUIREMENTS

To avoid potential contamination of groundwater, use a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment where possible. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading area and potential surface to groundwater conduits such as field sumps, uncased well heads, sink-holes, or field drains.

RUNOFF MANAGEMENT

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip.

Vegetative Filter Strips

Construct and maintain a vegetative filter strip, according to the width specified below, of grass or other permanent vegetation between the field edge and nearby down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing imidacloprid onto fields where a maintained vegetative filter strip of at least 10 feet exists between the field edge and where a down gradient aquatic habitat exists.

Western irrigated agriculture is exempt from this requirement. Western irrigated agriculture is defined as irrigated farmland in the following states: WA, OR, CA, ID, NV, UT, AZ, MT, WY, CO, NM, and TX (west of I-35).

For further guidance on vegetated filter strips, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_030970.pdf"

NO-SPRAY ZONE REQUIREMENTS FOR SOIL APPLICATIONS

Do not apply within 25 feet, of lakes; reservoirs; rivers; permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.

NO-SPRAY ZONE REQUIREMENTS FOR FOLIAR APPLICATIONS

Do not apply by ground within 25 feet, or by air within 150 feet of lakes; reservoirs; rivers; permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

Aerial Applications:

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed wing aircraft and 90% or less of the rotor diameter for helicopters.
- For aerial applicators, if the windspeed is 10 miles per hour or less, applicators must use ½ swatch displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swatch displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

Airblast Applications:

- Sprays must be directed into the canopy foliage.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer row.
- Do not apply during temperature inversions.

TAKE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce spray drift.

Controlling Droplet Size - Aircraft

- Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Boomless Ground Applications:

- Setting nozzles at the lowest effective height will help reduce the potential for spray drift.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

ENDANGERED SPECIES NOTICE

Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

PRODUCT INFORMATION

Midac FC is a versatile, broad-spectrum insecticide containing the active ingredient imidacloprid in a suspension concentrate (SC) product that is compatible with liquid fertilizers. Midac FC provides activity against listed important crop insect pests and can be used alternated with other insecticides with a different mode of action or tank-mixed with such insecticides and other crop protection products.

RESISTANCE MANAGEMENT

Midac FC contains the active ingredient imidacloprid which is a GROUP 4A INSECTICIDE and is effective against a variety of insect pests. Insects pests resistant to other chemical classes have not shown cross-resistance to imidacloprid or other neonicotinoids.

Some insect species are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities or universities for details.

For resistance management, Midac FC contains a Group 4A insecticide. Any insect population may contain individuals that are inherently resistant to Midac FC and other Group 4A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of Midac FC or other Group 4A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - o Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - o Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - o When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - o Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - o The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact Vive Crop Protection at 1-888-760-0187. You can also contact your pesticide distributor or university extension specialist to report resistance.

Maintaining Susceptibility to These Classes of Chemistry

For insects with a high potential to develop resistance it is recommended to follow these practices in each crop season:

- Only make a single application when using a soil-applied program and do not follow up with any additional foliar applications of Midac FC or other Group 4A insecticides.
- Avoid making a block of more than 3 consecutive foliar applications of Midac FC or other group 4A insecticides in the same crop season.
- Avoid making a foliar-applied program of Midac FC or other Group 4A insecticides in the same crop season that a soil-applied program of Midac FC or other group 4A insecticides has been applied targeting inspect species with a high potential to develop resistance.

Integrated Pest Management (IPM)

Midac FC should be used as one component in an integrated pest management program including cultural practices that reduce insect pest pressure. Consult your local extension specialist or certified crop advisor for local best practices to manage insect pests.

Application and Mixing Instructions

Midac FC is a suspension concentrate product. Shake or agitate well prior to measuring or pouring. Like most suspension concentrate products, Midac FC will thicken upon standing for long periods of time. Midac FC will revert back to an easily flowable fluid after a brief shake or stir.

Midac FC disperses finely in liquid fertilizer and micronutrient products without prior dilution with water. However, due to the wide variability in the composition and consistency of liquid fertilizers, it is recommended a jar-test be performed.

Midac FC insecticide is designed for at-plant, soil, and foliar applications, and must be diluted with water and/or liquid fertlizer before application. Refer to **Specific Use Directions for Field Crops** for pest control or suppression instructions.

Make sure that application equipment is thoroughly cleaned and properly calibrated prior to application and thoroughly cleaned after application.

- Use spray nozzles appropriate for the crop to provide full coverage and uniform distribution of the spray mixture.
- Use screens where appropriate to protect sprayer equipment and prevent clogging.
- Use screens to protect pump on the suction side with no finer than 16-mesh.
- Do not fit the recirculation line of the spray system with a screen.
- Screens used on the spray nozzles are to be no finer than 50-mesh.
- Use a spray system pump with sufficient capacity to deliver 35-40 psi of pressure to the nozzles and recirculate at least 10% of the tank volume per minute to maintain a uniform mixture.
- Agitate the spray mixture with a jet agitator or liquid sparge tube.
- Do not use air sparge.

Consult manufacturers of spray equipment for more information on sprayer use, calibration, and recommendations. Consult state agricultural extension recommendations for local directions and spray schedules.

Do not prepare more mixture than is required for the treatment. For best results, use immediately after mixing. If the mixtures settles, agitate the mixture and assess to ensure thorough re-mixing prior to application.

Choose a rate within the label ranges for the crop being treated based on expected insect pest pressure. This can be determined by history and scouting of the field and whether weather conditions are expected to be favorable. Use lower rates when insect pest pressure is expected to be light and use higher rates when insect pest pressure is expected to be heavy.

As with any insecticide, care must be taken to minimize exposure of Midac FC to honey bees and other pollinators. Additional information on Midac FC uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Vive Crop Protection representatives.

Unless otherwise directed by EPA registered supplemental labeling, follow the Directions for Use in each crop group section.

Application Rate Summary Table

fl oz Product/A	lb imidacloprid/A	Treated Acres per Gallon Product	Treated Acres per 2.5 Gallon Jug of Product
1.9	0.025	67	168
2.4	0.032	53	133
2.7	0.036	47	119
3.3	0.044	39	97
3.54	0.047	36	90
3.8	0.05	34	84
4.5	0.06	28	71
5.3	0.07	24	60
6.0	0.08	21	53
6.8	0.09	19	47
7.5	0.10	17	43
8.3	0.11	15	39
9.0	0.12	14	36
9.5	0.126	13	34
9.8	0.13	13	33
10.5	0.14	12	30

(continued)

Application Rate Summary Table *(continued)*

fl oz Product/A	lb imidacloprid/A	Treated Acres per Gallon Product	Treated Acres per 2.5 Gallon Jug of Product
12.0	0.16	11	27
13.6	0.18	9	24
15.1	0.20	8	21
17.3	0.23	7	18
18.1	0.24	7	18
18.8	0.25	7	17
20.3	0.27	6	16
21.1	0.28	6	15
22.6	0.30	6	14
23.3	0.31	5	14
24.8	0.33	5	13
25.6	0.34	5	13
27.1	0.36	5	12
27.9	0.37	5	11
28.6	0.38	4	11
30.1	0.40	4	11
37.6	0.50	3	9

Solo Midac FC Application Mixing Instructions

- Determine the required volume of water or liquid fertilizer for application and fill the spray/mixing tank with ½ - ⅔ of this volume.
- Begin agitation of the tank and add the required volume of Midac FC for the insecticide application. While pouring, avoid direct contact of Midac FC with the mix tank wall to achieve the best dispersion.
- Continue agitation while adding the remaining ½ - ⅓ volume of water or liquid fertilizer to complete the spray mixture.
- Apply the mixture after the contents of the tank are completely dispersed.
- Best practice is to maintain agitation of the spray tank until all of the spray mixture has been applied.
- Thoroughly rinse spray tank with water and dispose of the rinse water by spraying onto a section of the already treated crop.

Tank Mixture Application Instructions

Midac FC may be applied in tank mixtures with adjuvants, micronutrients, and other products approved for use on registered crops.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

When an adjuvant is used, it is recommended to use an adjuvant that meets the standards of the Council of Producers and Distributors of Agrotechnology (CPDA) adjuvant certification.

Tank Mixing Order Instructions

This is the general recommendation for order of addition. Always follow any specific order of addition instructions on all the tank-mix partner labels. Jar tests (or other similar methods) to ensure order of addition compatibility between products should be conducted before use. Allow each tank-mix partner to fully mix prior to adding the next component.

1. Fill tank ⅓ to ½ full with mixing diluent (water, liquid fertilizer, etc.).
2. Begin tank agitation before adding any tank-mix partners and ensure good agitation as each component is added.

3. Add any water conditioner/anti-foam/compatibility agents.
4. Add any products packaged in water-soluble packaging and allow to completely dissolve/disperse.
5. Add any wettable powders/flowables (DC, DS, GR, SG, SP).
6. Add any microencapsulated suspensions (ME).
7. Add any liquids and solubles (SC, SU), including Midac FC.
8. Add any emusifiable concentrates (EC).
9. Add any adjuvants.

Jar Test Procedure

Test potential mixing partners, including adjuvants, for mixing compatibility using a standard jar test or other similar method and for crop safety prior to use on a crop.

The following jar test procedure is recommended to evaluate compatibility: Following any product specific instructions for order of addition, pour the recommended proportions of the products into a suitable container, mix thoroughly and allow to stand at least twenty (20) minutes. If the combination remains mixed, or can be re-mixed readily, the mixture is considered physically compatible. If the combination does not remain mixed, or cannot be re-mixed readily, the products are not physically compatible and should not be tank-mixed together.

Instructions for Soil Applications

Apply Midac FC directly to the seed or root-zone of the crop. Loss of insect pest control or delayed activity may occur if treatment is not placed in specified location. Apply Midac FC by ground or chemigation application.

Applying Midac FC to the root-zone of plants is ideal, as it is the systemic activity of Midac FC that provides most control. Early application of Midac FC leads to early control of listed insect pests. Application in the root-zone results in uptake by the roots of the developing plant, and the active ingredient is translocated through the xylem tissue to the vegetative parts of the plant, resulting in residual control. The higher labeled rate may result in longer periods of residual control and are best used for late or continuous insect pest infestations throughout the growing season. However, protection will not generally last against pests infesting flowers, blooms, or fruit.

Residual activity of Midac FC controls insects which may vector disease transmission.

Refer to the Specific Use Directions to determine if Midac FC is labeled for a given crop and, if so, for which insect pests.

Check with your local extension specialist or certified crop advisor for specific advice on best local practices for insect control.

At Plant In-Furrow Application Rates (fl oz product per 1000 row ft)

Fl oz product per acre	Average Row Spacing (inches)							
	15	*20*	*22*	*24*	*30*	*32*	*34*	*36*
6.8	0.20	0.26	0.29	0.31	0.39	0.42	0.44	0.47
12.0	0.34	0.46	0.51	0.55	0.69	0.73	0.78	0.83
13.6	0.39	0.52	0.57	0.62	0.78	0.83	0.88	0.94
15.1	0.43	0.58	0.64	0.69	0.87	0.92	0.98	1.04
20.3	0.58	0.78	0.85	0.93	1.17	1.24	1.32	1.40
23.3	0.67	0.89	0.98	1.07	1.34	1.43	1.52	1.60
24.8	0.71	0.95	1.04	1.14	1.42	1.52	1.61	1.71
28.6	0.82	1.09	1.20	1.31	1.64	1.75	1.86	1.97

IMPORTANT: The linear application rate applied affects the duration and degree of control to a large extent. Linear application rates in the shaded region in the above table will provide early season protection to the seed and seeding, but may not provide residual pest control. These rates are not recommended for long-term residual control. Follow all crop specific use instructions regarding maximum use rates.

Linear Row Feet Calculation:
522,720 ÷ row spacing (in inches) = Row feet per acre

Instructions for Foliar Applications

Make foliar applications using properly calibrated ground or aerial application equipment for thorough coverage. Minimum spray volumes are 2 gallons or more per acre. See individual crop for specific application volume. Applications made with less than 5 gallons per acre may result in less control or slower activity from a single application when compared to higher spray volumes. Apply using the rates specified in the **Specific Use Directions for Field Crops** section and apply at the earliest threshold for the target pest as the pest population begins to develop. Scout the field and retreat if necessary, following all foliar use restrictions.

When pest pressure is low or when tank-mixing with products registered for target pest control the lower specified rates can be used. The stage of pest development at application and the infestation level will have an impact on the degree of control or suppression that can be achieved. Optimal performance of Midac FC is achieved against early instar and early nymphal stages of insects and bollworm/budworm eggs. The use of organosilicone-based spray adjuvants may provide better control when targeting aphids and whiteflies.

Suppression or less than complete control of certain diseases and insect pests including reduced feeding may also result from Midac FC applications. Supplemental control measures may be required to completely control these insect pests or diseases.

Chemigation Use Directions

Midac FC may be applied to crops through chemigation systems as specified in the **Specific Use Directions for Crop Plants** section.

- Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; furrow; border or drip (trickle) irrigation system(s). Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- Follow rates and application timings given in the specific crop instructions.
- The chemical supply tank and injector system must be thoroughly cleaned and flushed with clean water.
- Do not apply when wind speed favors drift beyond the targeted treatment area.

Require System Safety Devices

- The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional inter-locking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- If a pesticide supply tank is used, maintain constant agitation in the supply tank.

Specific Instructions for Public Water Systems

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

- Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pipe.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

Rotational Crops*

Crops for which imidacloprid tolerances exist may be rotated at any time.
IMMEDIATE PLANT-BACK: All crops on this label plus the following crops not on this label: barley; bulb vegetables; corn (field, pop & sweet); rapeseed/canola; sorghum; and wheat.
30-DAY PLANT-BACK: Cereals (including buckwheat, millet, oats, rice, rye, and triticale), safflower.
12-MONTH PLANT-BACK: All Other Crops.
*Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed

Specific Use Directions for Field Crops

Sugar Beets

For use only in CA

SUGAR BEETS - SOIL APPLICATIONS	
PESTS	**USE RATES fl oz product/A (lb a.i./A)**
Aphids Flea Beetles Leafhoppers Whiteflies Suppression of Symptoms of: Western Yellows / Beet Curly Top Hybrigeminivirus (BCTV)	6.8 – 13.6 (0.09 – 0.18)

Soil Application Instructions:

- Make an application directly below the eventual seed furrow during bedding operations immediately before or during planting. Apply using sufficient carrier volume to ensure uniform coverage.
- The low rate may be applied to aid the establishment of stands in whitefly areas, or for early season control of the other pests listed.

Soil Use Restrictions:

- **Application Restrictions:** Do not use on crops grown for seed.
- **Annual Maximum:** Do not use on crops grown for seed.
  - o Do not exceed 13.6 fl oz of Midac FC (0.18 lb a.i.) per acre per calendar year.
  - o Soil uses only: do not exceed 0.18 lb imidacloprid per acre per calendar year from all imidacloprid containing products.

Tuberous and Corm Vegetables Subgroup 1C

Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible (Queensland arrowroot); cassava, bitter and sweet[1]; chayote (root); chufa; dasheen (taro)[1]; ginger; leren; sweet potato[1]; tanier[1]; turmeric; yam bean; yam, true[1]. ([1]Tops or greens from these crops may be utilized for food or feed)

TUBEROUS AND CORM VEGETABLES - SOIL APPLICATIONS		
PESTS	**USE RATE fl oz product/A (lb a.i./A)**	**USE RATE fl oz product/1000 row ft @ 36" rows (lb a.i./1000 row ft @ 36" rows)**
Aphids Flea Beetles Leafhoppers Thrips (Foliage Feeding Thrips Only) Whiteflies	12.0 – 28.6 (0.16 – 0.38)	0.83 – 1.97 (0.011 – 0.026)

Soil Application Instructions:

- Make application by one of the following methods:
  - o As an in-furrow spray directed over the planting material (hulis) during planting.
  - o Shanked in 1" – 2" below the hulis depth during planting.
  - o As a side-dress of not more than 0.70 fl oz Midac FC/1000 row ft no later than 45 days after planting, following the pre-harvest interval below.
- Linear application rates affect the duration and degree on control to a large extent. The linear application rate in the table is based on 36" row spacing. See the **Application and Mixing Instructions** section for more information and application rates for different row spacing. In all cases do not exceed the maximum per acre use restriction.
- Applications to crops grown in very high organic matter soils (muck) may also require additional pest management solutions for control.

Soil Use Restrictions:

- **Application Restrictions:** Do not use on crops grown for seed.
- **Annual Maximum:**
  - o Do not exceed 1 application of Midac FC per acre per calendar year.
  - o Do not exceed 28.6 fl oz of Midac FC (0.38 lb a.i.) per acre per calendar year.
  - o Soil uses only: do not exceed 0.38 lb imidacloprid per acre per calendar year from all imidacloprid containing products.
- **Pre-Harvest Interval (PHI):**
  - o **Corms:** 125 days.
  - o **Leaves:** 3 days.

(continued)

Tuberous and Corm Vegetables Subgroup 1C
(continued)

TUBEROUS AND CORM VEGETABLES - FOLIAR APPLICATIONS	
PESTS	**USE RATE fl oz product/A (lb a.i./A)**
Aphids Flea Beetles Leafhoppers Whiteflies	3.3 (0.044)

Foliar Application Instructions:
- Apply as a broadcast or directed spray with sufficient spray volume to ensure thorough coverage targeting the infested area.

Foliar Use Restrictions:
- **State Restrictions:** Not for use in California.
- **Application Restrictions:** Do not use on crops grown for seed.
- **Annual Maximum:**
  - o Do not exceed 3 application of Midac FC per acre per calendar year.
  - o Do not exceed 9.8 fl oz of Midac FC (0.13 lb a.i.) per acre per calendar year.
  - o Foliar uses only: do not exceed 0.13 lb imidacloprid per acre per calendar year from all imidacloprid containing products.
- **Application Interval:** Do not make applications less than 5 days apart.
- **Pre-Harvest Interval (PHI):** 7 days.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage
Store in original containers only. Store in a cool and dry place, in such a manner as to avoid cross-contamination. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

Pesticide Disposal
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Container Handling less than or equal to 5 gallons - Non-refillable container:
Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.

IMPORTANT INFORMATION
READ BEFORE USING PRODUCT

Conditions of Sale and Limitation of Warranty and Liability:

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of Vive Crop Protection or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Vive Crop Protection and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, VIVE CROP PROTECTION MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT.

Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or Vive Crop Protection, and buyer assumes the risk of any such use.

To the extent consistent with applicable law, Vive Crop Protection or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF VIVE CROP PROTECTION AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF VIVE CROP PROTECTION OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement except as signed by an authorized representative of Vive Crop Protection.

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