

PMRA Corrected Label HC  
2021-3095  
2022-11-07  
Label correction 2023-06-13

|              |           |                    |
|--------------|-----------|--------------------|
| <b>GROUP</b> | <b>29</b> | <b>INSECTICIDE</b> |
|--------------|-----------|--------------------|

**Label**

## **Carbine™ Insecticide**

FOR SALE FOR USE IN THE PRAIRIE PROVINCES, PEACE RIVER REGION AND  
INTERIOR OF BRITISH COLUMBIA ONLY

### **COMMERCIAL**

WATER DISPERSIBLE GRANULES

READ THE LABEL AND THE PAMPHLET BEFORE USING

ACTIVE INGREDIENT: Fonicamid..... 50.0%

Contains 500 grams of Fonicamid per kilogram of formulated product

WARNING – EYE IRRITANT

REGISTRATION NO: 34659 PEST CONTROL PRODUCTS ACT

Net Contents: 0.5 – 100 kg

ISK Biosciences Corporation  
7470 Auburn Road  
Suite A  
Concord, Ohio 44077 U.S.A.  
1-877-706-4640

## **PRECAUTIONS**

### **KEEP OUT OF REACH OF CHILDREN**

**DO NOT** take internally. Harmful if swallowed.

Causes eye irritation. **DO NOT** get in eyes.

Avoid prolonged contact with skin. Wash exposed areas of skin thoroughly with soap and warm water after handling or using. Remove contaminated clothing and wash before re-use.

Avoid breathing spray mist.

Wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and shoes, and protective eyewear (goggles or face shield) during mixing, loading, application, clean-up and repair. In addition, wear chemical-resistant headgear during open cab airblast/air assisted application. Chemical-resistant headgear includes Sou'Wester hat, chemical-resistant rain hat or large brimmed waterproof hat and hood with sufficient neck protection. Gloves and protective eyewear are not required during application within a closed cab.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

**DO NOT** apply using aerial application equipment.

## **ENVIRONMENTAL PRECAUTIONS**

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

**TOXIC** to non-target terrestrial plants. Observe spray buffer zones specified under **DIRECTIONS FOR USE**.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm or less above the crop or ground.

## **FIRST AID**

**IF SWALLOWED**: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING**: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

**IF INHALED**: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**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 eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

In Case of Emergency: Call 1-888-484-7546.

## **TOXICOLOGICAL INFORMATION**

Treat symptomatically.

## **STORAGE**

Store product in original container, in a secured, dry place separate from other pesticides, fertilizer, food, and feed.

## **DISPOSAL**

Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.

Follow provincial instruction for any required additional cleaning of the container prior to its disposal.

Make the empty container unsuitable for further use.

Dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

## **NOTICE TO USER**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

Carbine<sup>TM</sup> is a trademark of Ishihara Sangyo Kaisha, Ltd.

Pamphlet

## **Carbine™ Insecticide**

FOR SALE FOR USE IN THE PRAIRIE PROVINCES, PEACE RIVER REGION AND  
INTERIOR OF BRITISH COLUMBIA ONLY

### **COMMERCIAL**

WATER DISPERSIBLE GRANULES

READ THE LABEL AND THE PAMPHLET BEFORE USING

ACTIVE INGREDIENT:..... Flonicamid 50.0%

Contains 500 grams of Flonicamid per kilogram of formulated product

WARNING – EYE IRRITANT

REGISTRATION NO: 34659 PEST CONTROL PRODUCTS ACT

ISK Biosciences Corporation  
7470 Auburn Road  
Suite A  
Concord, Ohio 44077 U.S.A.  
1-877-706-4640

## **PRECAUTIONS**

### **KEEP OUT OF REACH OF CHILDREN**

**DO NOT** take internally. Harmful if swallowed.  
Causes eye irritation. **DO NOT** get in eyes.

Avoid prolonged contact with skin. Wash exposed areas of skin thoroughly with soap and warm water after handling or using. Remove contaminated clothing and wash before re-use.

Avoid breathing spray mist.

Wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and shoes, and protective eyewear (goggles or face shield) during mixing, loading, application, clean-up and repair. In addition, wear chemical-resistant headgear during open cab airblast/air assisted application. Chemical-resistant headgear includes Sou'Wester hat, chemical-resistant rain hat or large brimmed waterproof hat and hood with sufficient neck protection. Gloves and protective eyewear are not required during application within a closed cab.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

**DO NOT** apply using aerial application equipment.

## **ENVIRONMENTAL PRECAUTIONS**

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

**TOXIC** to non-target terrestrial plants. Observe spray buffer zones specified under **DIRECTIONS FOR USE**.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.  
Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

## **FIRST AID**

**IF SWALLOWED:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**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 eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

In Case of Emergency: Call 1-888-484-7546.

## **TOXICOLOGICAL INFORMATION**

Treat symptomatically.

## **STORAGE**

Store product in original container, in a secured, dry place separate from other pesticides, fertilizer, food, and feed.

## **DISPOSAL**

Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.

Follow provincial instruction for any required additional cleaning of the container prior to its disposal.

Make the empty container unsuitable for further use.

Dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**DIRECTIONS FOR USE**

Carbine™ Insecticide can be used against the listed pests on flax, legume vegetables (succulent or dried, excluding soybeans, Crop Group 6), alfalfa grown for seed and non-grass Animal Feeds.

The rate of application is dependent upon the insect species present, the level of insect pressure, and the amount of foliage present. Begin applications before populations begin to build or at economic thresholds according to local economic guidelines. Refer to local Cooperative Extension Guideline and/or time applications for scouting results. Thorough plant coverage is essential for good performance.

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

**Mode of Action**

Carbine™ Insecticide is a member of the pyridinecarboxamide class of chemistry. Carbine™ Insecticide controls target pests by contact and ingestion provoking rapid and irreversible feeding cessation. Aphids could remain on the plant until they desiccate.

**Field sprayer application:** DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm or less above the crop or ground.

**Spray buffer zones:**

A spray buffer zone is NOT required for uses with hand-held application equipment permitted on this label.

The spray buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands).

| Method of application | Crop  | Spray Buffer Zones (metres) Required for the Protection of: |
|-----------------------|---|---|
|                       |   | Terrestrial habitat   |
| Field sprayer         | Flax, Alfalfa grown for seed, Legume vegetables – Succulent or Dried (except soybean) (Crop Group 6), Non-grass animal feeds. | 1   |

|  |  |  |
|--|--|--|
|  |  |  |
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When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

### **Resistance Management**

For resistance management, please note that Carbine™ Insecticide contains a Group 29 insecticide. Any insect population may contain individuals naturally resistant to Carbine™ Insecticide and other Group 29 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of Carbine™ Insecticide or other Group 29 insecticides with different groups that control the same pests. Avoid application of more than 3 consecutive sprays of Carbine™ Insecticide or other insecticides in the same group in a season.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting and record keeping, and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- 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 ISK Biosciences Corporation at 1-877-706-4640.

### **Use Restrictions**

Do not use this product in home gardens.

### **Crop Rotation Restrictions**

Following application of Carbine™ Insecticide, any crop listed on this label may be planted at any time.

All other crops may be planted 30 days after the last application of Carbine™ Insecticide.

## Pre-Harvest Intervals

| Crop  | PHI Days |
|---|----------|
| Flax  | 7        |
| Non-grass Animal Feeds  | 7        |
| Legume Vegetables -- Succulent or Dried (except soybean) (Crop Group 6) | 7        |

## Mixing and Loading Instructions

Ensure the spray system is clean and free of residues from previous applications. Fill the spray tank 1/2 full with clean water. Ensure the agitation system is operating and sufficient to provide uniform spray mixing during application and until the spray tank has been emptied. Complete filling the spray tank to the desired level.

Avoid the overnight storage of Carbine™ Insecticide spray mixtures.

Premixing Carbine™ Insecticide solutions in nurse tanks is not recommended. Prepare no more spray mixture than is needed for the immediate application.

Do not use liquid fertilizer as a carrier for Carbine™ Insecticide.

## Spray Equipment Clean Out

After spraying Carbine™ Insecticide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned.

## Application Information

All ground application equipment must be properly maintained and calibrated using appropriate carriers. Use the largest droplet size consistent with good pest control.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage. Finished spray volumes should be increased under extreme pest populations or dense plant foliage.

## Ground Application

Utilize a boom and nozzle sprayer equipped with the appropriate nozzles, spray tips and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures. Utilize nozzles that produce minimal amounts of fine spray droplets. Do not exceed 205 kPa (30 psi) spray pressure unless otherwise required by the manufacturer of drift reducing nozzles. Sprayers should be adjusted to position spray tips a minimum of 46 cm (18 inches) above the crop. Be aware that overlaps and slower ground speeds while starting, stopping or turning while spraying may result in higher application rates.

### Flax (7 day PHI)

| PESTS  | RATE OF APPLICATION                        |   | COMMENTS  |
|--------|--|---|---|
|        | Kilograms Carbine™ Insecticide per Hectare | Kilograms Active Ingredient per Hectare |   |
| Aphids | 0.12 to 0.16                               | 0.06 to 0.08                            | Within the range, use higher rates for greater pest populations and/or dense foliage. |

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 94 litres per hectare when applied by ground. Finished spray volumes should be increased when plant foliage is dense.

Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary.

Allow a minimum of 7 days between applications.

Do not apply more than 3 applications per year.

Do not apply more than 0.16 kilograms per hectare Carbine™ Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Carbine™ Insecticide (0.24 kilograms a.i. per hectare) per season.

## Non-grass Animal Feeds (Forage, Fodder, Straw and Hay) (7 day PHI)

Alfalfa; clover (*Trifolium* spp., *Melilotus* spp.); lespedeza; lupin; sainfoin; trefoil; vetch; vetch, crown; vetch, milk.

| PESTS               | RATE OF APPLICATION                                  |  | COMMENTS  |
|---------------------|--|--|---|
|                     | Kilograms Carbine™ Insecticide per Hectare           | Kilograms Active Ingredient per Hectare              |   |
| Aphids              | 0.12 to 0.16   | 0.06 to 0.08   | Within the range, use higher rates for greater pest populations and/or dense foliage. |
| Tarnished Plant Bug | 0.20 (3 applications)<br>or<br>0.30 (2 applications) | 0.10 (3 applications)<br>or<br>0.15 (2 applications) |   |

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 94 litres per hectare when applied by ground. Finished spray volumes should be increased when plant foliage is dense.

Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary.

Allow a minimum of 7 days between applications.

Do not apply more than 3 applications per year.

Do not apply more than 0.30 kilograms per hectare Carbine™ Insecticide (0.15 kilograms a.i. per hectare) per application. Do not apply more than 0.60 kilograms per hectare Carbine™ Insecticide (0.30 kilograms a.i. per hectare) per season.

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than ISK Biosciences Corporation under the User Requested Minor Use Label Expansion program. For these uses, ISK Biosciences Corporation has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

**Alfalfa grown for seed (7 day PHI)**

| PESTS               | RATE OF APPLICATION   |   | COMMENTS   |
|---------------------|---|---|--|
|                     | Kilograms Carbine™ Insecticide per Hectare                      | Kilograms Active Ingredient per Hectare                         |  |
| Aphids              | 0.12 to 0.16<br>Maximum   | 0.06 to 0.08<br>Maximum   | Within the range, use higher rate for greater pest populations and/or dense foliage. |
| Tarnished Plant Bug | 0.20 (3 applications)<br>or<br>Maximum<br>0.30 (2 applications) | 0.10 (3 applications)<br>Or<br>Maximum<br>0.15 (2 applications) |  |

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 100 litres per hectare when applied by ground. Finished spray volumes should be increased when plant foliage is dense.

Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary.

Allow a minimum of 7 days between applications.

Do not apply more than 3 applications per year.

Do not apply more than 0.30 kilograms per hectare Carbine™ Insecticide (0.15 kilograms a.i. per hectare) per application. Do not apply more than 0.60 kilograms per hectare Carbine™ Insecticide (0.30 kilograms a.i. per hectare) per season.

Do not use seed or treated forage for human or animal consumption.

**Legume Vegetables – Succulent or Dried, except soybeans (7 day PHI)**

Bean (*Lupinus* spp.) (includes grain lupin, sweet lupin, white lupin and white sweet lupin), Bean (*Phaseolus* spp.) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean and wax bean); bean (*Vigna* spp.) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean and yardlong bean), Broadbean, (fava bean) (*Vicia faba*), Chickpea (garbanzo bean) (*Cicer arietinum*), Guar (*Cyamopsis tetragonoloba*), Jackbean (*Canavalia ensiformis*), Lablab bean (hyacinth bean) (*Lablab purpureus*), Lentil (*Lens esculenta*), Pea (*Pisum* spp.) (includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea), Pigeon pea (*Cajanus cajan*), Sword bean (*Canavalia gladiata*)

| PESTS  | RATE OF APPLICATION                        |   | COMMENTS  |
|--|--|---|---|
|  | Kilograms Carbine™ Insecticide per Hectare | Kilograms Active Ingredient per Hectare |   |
| Aphids   | 0.12 to 0.16                               | 0.06 to 0.08                            | Apply before aphid populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary. Within the range use, higher rates for greater pest populations and/or dense foliage. |
| Reduces the numbers of lygus bugs including tarnished plant bug  | 0.20                                       | 0.10                                    | Apply when lygus bugs first appear in the field and before populations reach high levels. Carbine™ Insecticide will stop lygus bug feeding rapidly but it may take several days to see a reduction in lygus bug numbers. Reapply when new insects are detected.               |
| Thorough spray coverage of plant foliage is essential for optimum performance. Apply in sufficient water to ensure good coverage; use a minimum of 94 litres per hectare when applied by ground. Finished spray volumes should be increased when plant foliage is dense. |  |   |   |

Allow a minimum of 7 days between applications.

Do not apply more than 3 applications per year.

**For applications to control aphids:** Do not apply more than 0.16 kilograms per hectare Carbine™ Insecticide (0.08 kilograms a.i. per hectare) per application (up to 3 applications per season).

**For applications to reduce the numbers of lygus bugs:** Do not apply more than 0.20 kilograms per hectare Carbine™ Insecticide (0.10 kilograms a.i. per hectare) per application (up to 3 applications per season).

#### NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

Carbine™ is a trademark of Ishihara Sangyo Kaisha, Ltd.

2024-2314  
2024-06-27

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| <b>GROUP</b> | <b>29</b> | <b>INSECTICIDE</b> |
|--------------|-----------|--------------------|

**FOR EMERGENCY USE ONLY**  
For use only to control Lygus bugs (*Lygus* spp.) on confection  
sunflowers in Manitoba from from July 21, 2024 until July 20, 2025.

**Carbine<sup>®</sup> Insecticide**

**COMMERCIAL**

WATER DISPERSABLE GRANULES

READ THE LABEL BEFORE USING

ACTIVE INGREDIENT: Fonicamid..... 50.0%

Contains 500 grams of Fonicamid per kilogram of formulated product

WARNING – EYE IRRITANT

REGISTRATION NO: 34659 PEST CONTROL PRODUCTS ACT

Net Contents: 0.5 – 100 kg

ISK Biosciences Corporation  
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(Long distance charges apply)

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2024-2314  
2024-06-27

**Sunflower (confection sunflower only) (0 day PHI)**

| PESTS  | RATE OF APPLICATION                                    |   | COMMENTS  |
|--|--|---|---|
|  | Kilograms Carbine <sup>®</sup> Insecticide per Hectare | Kilograms Active Ingredient per Hectare |   |
| Lygus bugs<br>( <i>Lygus</i> spp.)   | 0.20   | 0.10                                    | Apply when lygus bugs first appear in the field and before populations reach high levels. Carbine <sup>®</sup> Insecticide will stop lygus bug feeding rapidly but it may take several days to see a reduction in lygus bug numbers. Reapply when new insects are detected. |
| <p>Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage; use a minimum of 50 litres per hectare when applied by ground and 30 liters per hectare by air. Finished spray volumes should be increased when plant foliage is dense.</p> <p>Allow a minimum of 7 days between applications.</p> <p>Do not apply more than 3 applications per year.</p> <p>Do not apply more than 0.20 kilograms per hectare Carbine<sup>®</sup> Insecticide (0.10 kilograms a.i. per hectare) per application (up to 3 applications per season).</p> |  |   |   |

## PRECAUTIONS

### KEEP OUT OF REACH OF CHILDREN

**DO NOT** take internally. Harmful if swallowed.  
Causes eye irritation. **DO NOT** get in eyes.

Avoid prolonged contact with skin. Wash exposed areas of skin thoroughly with soap and warm water after handling or using. Remove contaminated clothing and wash before re-use.

Avoid breathing spray mist.

Wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and shoes, and protective eyewear (goggles or face shield) during mixing, loading, application, clean-up and repair. In addition, wear chemical-resistant headgear during open cab airblast/air assisted application. Chemical-resistant headgear includes Sou'Wester hat, chemical-resistant rain hat or large brimmed waterproof hat and hood with sufficient neck protection. Gloves and protective eyewear are not required during application within a closed cab and/or cockpit.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. The pilot is allowed to load premixed chemicals with a closed system.

Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

**Pesticide Storage:** Store product in original container, in a secured, dry place separate from other pesticides, fertilizer, food, and feed.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at [www.croplife.ca](http://www.croplife.ca).

### ENVIRONMENTAL PRECAUTIONS

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

TOXIC to non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE.

Toxic to bees. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. If applications must be made during the crop blooming period, when possible,

2024-2314  
2024-06-27

restrict applications to the evening when most bees are not foraging. To further minimize exposure to pollinators, refer to the complete guidance “Protecting Pollinators during Pesticide Spraying – Best Management Practices” on the Health Canada website ([www.canada.ca/pollinators](http://www.canada.ca/pollinators)).

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.  
Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

## **FIRST AID**

**IF SWALLOWED:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**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 eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

In Case of Emergency: Call 1-888-484-7546.

## **TOXICOLOGICAL INFORMATION**

Treat symptomatically.

## **STORAGE**

Store product in original container, in a secured, dry place separate from other pesticides, fertilizer, food, and feed.

2024-2314  
2024-06-27

## **DISPOSAL**

Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.

Follow provincial instruction for any required additional cleaning of the container prior to its disposal.

Make the empty container unsuitable for further use.

Dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

## **DIRECTIONS FOR USE**

Carbine<sup>®</sup> Insecticide can be used against Lygusbugs (*Lygus spp.*) on sunflowers.

The rate of application is dependent upon the insect species present, the level of insect pressure, and the amount of foliage present. Begin applications before populations begin to build or at economic thresholds according to local economic guidelines. Refer to local Cooperative Extension Guideline and/or time applications for scouting results. Thorough plant coverage is essential for good performance.

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

### **Mode of Action**

Carbine<sup>®</sup> Insecticide is a member of the pyridinecarboxamide class of chemistry. Carbine<sup>®</sup> Insecticide controls target pests by contact and ingestion provoking rapid and irreversible feeding cessation. Lygus bugs could remain on the plant until they desiccate.

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

Aerial application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the

2024-2314  
2024-06-27

American Society of Agricultural Engineers (ASAE S572.1) medium classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

### Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

### Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-440-357-4640 or obtain technical advice from the distributor or your provincial agricultural representative.

### SPRAY BUFFER ZONES

The spray buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands).

| Method of application | Crop                   | Spray Buffer Zones (metres) Required for the Protection of: |   |
|-----------------------|------------------------|---|---|
|                       |                        | Terrestrial Habitat:  |   |
| Field sprayer         | Sunflower (confection) |   | 1 |
| Aerial                | Sunflower (confection) | Fixed wing  | 1 |
|                       |                        | Rotary wing   | 1 |

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and

2024-2314  
2024-06-27

apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

### **Resistance Management Recommendations**

For resistance management, please note that Carbine<sup>®</sup> Insecticide contains a Group 29 insecticide. Any insect population may contain individuals naturally resistant to Carbine<sup>®</sup> Insecticide and other Group 29 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of Carbine<sup>®</sup> Insecticide or other Group 29 insecticides with different groups that control the same pests. Avoid application of more than 3 consecutive sprays of Carbine<sup>®</sup> Insecticide or other insecticides in the same group in a season.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting and record keeping, and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- 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 ISK Biosciences Corporation at 1-877-706-4640.

### **Use Restrictions**

Do not use this product in home gardens.

### **Crop Rotation Restrictions**

Following application of Carbine<sup>®</sup> Insecticide, any crop listed on this label may be planted at any time.

All other crops may be planted 30 days after the last application of Carbine<sup>®</sup> Insecticide.

### **Mixing and Loading Instructions**

Ensure the spray system is clean and free of residues from previous applications. Fill the spray tank 1/2 full with clean water. Ensure the agitation system is operating and sufficient to provide uniform spray mixing during application and until the spray tank has been emptied. Complete filling the spray tank to the desired level.

2024-2314  
2024-06-27

Avoid the overnight storage of Carbine<sup>®</sup> Insecticide spray mixtures.

Premixing Carbine<sup>®</sup> Insecticide solutions in nurse tanks is not recommended. Prepare no more spray mixture than is needed for the immediate application.

Do not use liquid fertilizer as a carrier for Carbine<sup>®</sup> Insecticide.

### **Spray Equipment Clean Out**

After spraying Carbine<sup>®</sup> Insecticide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned.

### **Application Information**

All ground application equipment must be properly maintained and calibrated using appropriate carriers. Use the largest droplet size consistent with good pest control.

Thorough spray coverage of plant foliage is essential for optimum control. Apply in sufficient water to ensure good coverage. Finished spray volumes should be increased under extreme pest populations or dense plant foliage.

### **Ground Application**

Utilize a boom and nozzle sprayer equipped with the appropriate nozzles, spray tips and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures. Utilize nozzles that produce minimal amounts of fine spray droplets. Do not exceed 205 kPa (30 psi) spray pressure unless otherwise required by the manufacturer of drift reducing nozzles. Sprayers should be adjusted to position spray tips a minimum of 46 cm (18 inches) above the crop. Be aware that overlaps and slower ground speeds while starting, stopping or turning while spraying may result in higher application rates.

### **Aerial Applications**

Utilize a boom and nozzle sprayer equipped with the appropriate nozzles, spray tips and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures. Utilize nozzles that produce minimal amounts of fine spray droplets. Do not exceed 30 psi spray pressure unless otherwise required by the manufacturer of drift reducing nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight. Use nozzle types and arrangements that will provide optimum coverage while producing a minimal amount of fine droplets.

### **NOTICE TO USER**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.