

GROUP	9C	INSECTICIDE
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## **Beleaf™ 50SG Insecticide**

**COMMERCIAL**

SOLUBLE GRANULES

READ THE LABEL BEFORE USING

GUARANTEE: Flonicamid 50.0%

Warning, contains the allergens milk and sulfites

Contains 500 grams of Flonicamid per kilogram of formulated product

CAUTION – EYE IRRITANT

REGISTRATION NO: 29796    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

Beleaf™ is a trademark of Ishihara Sangyo Kaisha, Ltd

## PRECAUTIONS

### KEEP OUT OF REACH OF CHILDREN

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

May irritate eyes.

Avoid contact with 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.

During mixing, loading, application, and cleanup and repair: worker must wear long sleeve shirt, chemical resistant gloves, and goggles. Applicators must also wear a chemical resistant hat when using open cab airblast/air assisted application equipment.

During application: worker must wear a long sleeve shirt and long pants. Chemical resistant gloves must also be worn when using hand-held application equipment.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. For pome fruit, stone fruit, hops and outdoor ornamentals (excluding conifers) please refer to the individual use descriptions for activity-specific restricted entry intervals.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature, 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 HAZARDS

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 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 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.

Airblast application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. DO NOT apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

DO NOT apply by air.

Buffer zones:

The 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		Buffer Zones (metres) Required for the Protection of:
			Terrestrial habitat
Field sprayer	Brassica leafy vegetables, fruiting vegetables, hop, leafy vegetables, tuberous and corm vegetables, root vegetables, outdoor ornamentals, low growing berry subgroup 13-07G		1
Airblast	Pome fruit, stone fruit and outdoor ornamentals	Early growth stage	1
		Late growth stage	1

## 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.

## **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**

Beleaf™ 50SG Insecticide can be used against the listed pests on Brassica (cole) leafy vegetables, cucurbit vegetables, fruiting vegetables, leafy vegetables (excluding Brassica), hop, tuberous and corm vegetables, root vegetables (excluding sugar beets), pome fruit, stone fruit, alfalfa grown for seed, mint (spearmint, peppermint), greenhouse cucumbers, greenhouse tomatoes and low growing berries (Crop Subgroup 13-07G).

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.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, pond or other waters.

### **Mode of Action**

Beleaf™ 50SG Insecticide is a member of the pyridinecarboxamide class of chemistry. Beleaf™ 50SG Insecticide controls target pests by contact and ingestion provoking rapid and irreversible feeding cessation. Aphids could remain on the plant until they desiccate.

### **Resistance Management**

For resistance management, please note that Beleaf 50SG Insecticide contains a Group 9C insecticide. Any insect population may contain individuals naturally resistant to Beleaf 50SG Insecticide and other Group 9C insecticides. The resistant individuals may dominate the insect population if this group of insecticides are 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 Beleaf 50SG Insecticide or other Group 9C insecticides with different groups that control the same pests in a field. Avoid application of more than 3 consecutive sprays of Beleaf 50SG 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, 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 1-440-357-4640 (Long distance charges apply).

### Use Restrictions

Do not use this product in home gardens.

### Crop Rotation Restrictions

Following application of Beleaf™ 50SG 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 Beleaf™ 50SG Insecticide.

### Pre-Harvest Intervals

Crop	PHI Days
Brassica (Cole) Leafy Vegetables	0
Cucurbit Vegetables	0
Fruiting Vegetables (except cucurbits)	0
Hop	31
Leafy Vegetables (except Brassica)	0
Tuberous and Corm Vegetables	7
Root Vegetables (except sugar beets)	3
Pome Fruit	21
Stone Fruit	14
Cucumber, greenhouse	0
Tomato, greenhouse	0
Mint: Spearmint, Peppermint	7
Low growing berry subgroup 13-07G	0

### 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 Beleaf™ 50SG Insecticide spray mixtures.

Premixing Beleaf™ 50SG 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 Beleaf™ 50SG Insecticide.

### **Adjuvant Use Requirements and Precautions**

Beleaf™ 50SG Insecticide should not be used with spray adjuvants.

### **Spray Equipment Clean Out**

After spraying Beleaf™ 50SG 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.

### **Chemigation Application**

Apply this product only through drip (trickle) (greenhouse cucumbers only) irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect any irrigation system, including greenhouse systems, used for pesticide application to a public water system. Crop injury, lack of effectiveness or illegal residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact Provincial Extension specialists, equipment manufacturers, or other experts. 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.

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 backflow. The pesticide injection pipeline must also 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 interlocking 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. Do not apply when wind speed favors drift beyond the area intended for treatment. Beleaf 50SG should be applied continuously for the duration of the water application. Beleaf 50SG should be diluted in sufficient volume to insure accurate application over the area to be treated. Use the appropriate amount of water to carry the product to the target pest. Agitation generally is not required when suitable diluents are used. A diluents test should be conducted to ensure that phase separation would not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

Using Water from Public Water Systems: **DO NOT APPLY Beleaf 50SG THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM.** 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. Beleaf 50SG may be applied through irrigation systems, which may be **supplied** by a public water system **only if** water from the water system is discharged 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 top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

## Brassica (Cole) Leafy Vegetables (0 day PHI)

### Crop Group 5

**Broccoli; Chinese broccoli; Broccoli raab (rapini); Brussels sprouts; Cabbage; Chinese cabbage (bok choy); Chinese cabbage (napa); Chinese mustard cabbage; Cauliflower; Cavalo broccoli; Collards; Kale; Kohlrabi; Mizuna; Mustard greens; Mustard spinach; Rape greens.**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	Use higher rates for greater pest populations and/or dense foliage.
<p>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.</p> <p>Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary.</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 0.16 kilograms per hectare Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.</p>			



## Cucurbit Vegetables (0 day PHI)

### Crop Group 9

**Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra); Momordica spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of Cucumis melo) (includes true cantaloupe, cantaloupe, casaba, creshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin; Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Squash, winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); Watermelon (includes hybrids and/or varieties of Citrullus spp.).**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	Use higher rates for greater pest populations and/or dense foliage.
<p>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.</p> <p>Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary.</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 0.16 kilograms per hectare Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.</p>			

**Fruiting Vegetables (except cucurbits) (0 day PHI)**

**Crop Group 8-09**

**African eggplant; bell pepper; currant tomato; eggplant; garden huckleberry; goji berry; groundcherry; martynia; okra; pea eggplant; pepino; nonbell pepper; scarlet eggplant; sunberry; tomatillo; tomato; cultivars, varieties, and/or hybrids of these.**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	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 Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.

**Hop (31 day PHI):**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	Use higher rates for greater pest populations and/or dense foliage.
<p>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.</p> <p>Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary.</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 0.16 kilograms per hectare Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.</p> <p>For hops, do not enter or allow worker entry for the purpose of performing stripping and training activities in treated areas during the restricted entry interval (REI) of 31 days.</p>			

## Leafy Vegetables (except *Brassica*) (0 day PHI)

### Crop Group 4

**Amaranth (leafy amaranth, Chinese spinach, tampala); Arugula (Roquette); Cardoon; Celery; Celery, Chinese; Celtuce; Chervil; Chrysanthemum, edible- leaved and garland; Corn salad; Cress, garden; Cress, upland (yellow rocket, winter cress); Dandelion; Dock (sorrel); Endive (escarole); Fennel, Florence (finocchio); Lettuce, head and leaf; Orach; Parsley; Purslane, garden; Purslane, winter; Radicchio (red chicory); Rhubarb; Spinach; Spinach, New Zealand; Spinach, vine (Malabar spinach, Indian spinach); Swiss chard.**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	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 Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.

## Tuberous and Corm Vegetables (7 day PHI)

### Crop Subgroup 1C

**Artichoke, Chinese; Artichoke, Jerusalem; Casava, bitter and sweet; Chayote (root); Chufa; Dasheen (taro); Ginger; Potato; Sweet potato; Yam (true).**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	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 Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.

**Root Vegetables (except sugar beets) (3 day PHI)**

**Crop Subgroup 1B**

**Beet, garden; Burdock, edible; Carrot; Celeriac; Chervil, turnip-rooted; Chicory; Ginseng; Horseradish; Parsley, turnip-rooted; Parsnip (Pastinaca sativa); Radish; Radish, oriental; Rutabaga; Salsify; Salsify, black; Salsify, Spanish; Skirret; Turnip.**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	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 Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.

## Pome Fruit (21 day PHI)

### Crop Group 11-09

**Apple; azarole; crabapple; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these.**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	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 Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.

Do not enter or allow worker entry for the purpose of performing thinning activities in treated areas during the restricted entry interval (REI) of 2 days.

## Stone Fruit (14 day PHI)

### Crop Group 12-09

Apricot; apricot, Japanese; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; sloe; cultivars, varieties, and/or hybrids of these.

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	Use higher rates for greater pest populations and/or dense foliage.
<p>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.</p> <p>Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary.</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 0.16 kilograms per hectare Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.</p> <p>Do not enter or allow worker entry for the purpose of performing thinning activities in treated areas during the restricted entry interval (REI) of 2 days.</p>			



**NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:**

The DIRECTIONS FOR USE for this product for the use(s) described below were developed by persons other than ISK Biosciences Corporation and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. ISK Biosciences Corporation itself makes no representation or warranty with respect to performance (efficacy) or crop tolerance (phytotoxicity) claims for this product when used on the crops listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold ISK Biosciences Corporation harmless from any claims based on efficacy or phytotoxicity in connection with the use(s) described below.

**Alfalfa grown for seed**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	

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 0.16 kilograms per hectare Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.

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

**Cucumber, Greenhouse (0 day PHI)**

PESTS	RATE OF APPLICATION	COMMENTS
Thrips Aphids	0.3 g product/L (30 g product/100 L)	Foliar application. Apply sufficient volume to ensure good coverage, up to 1000 L/ha. The maximum volume should be used when plant foliage is dense. Do not apply more than 1 foliar application per crop cycle.
	12.5 mg product/plant	Apply using drip irrigation <sup>1</sup> or drench by hand using sufficient water volume to ensure delivery of the product to the roots.

<sup>1</sup>See Chemigation Section of this label for additional information.

Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established.

Allow a minimum of 7 days between applications.

Do not apply more than 2 applications per crop cycle (no more than 1 application per crop cycle may be foliar).

**Tomato, Greenhouse (0 day PHI)**

PESTS	RATE OF APPLICATION	COMMENTS
Whiteflies	0.2 g product/L (20 g product/100 L)	Foliar application. Apply sufficient volume to ensure good coverage. The spray volume can vary from 500 to 1000 L/ha, depending on the size of the plants. The maximum volume should be used when plant foliage is dense. Use of this product on greenhouse tomatoes is restricted to plant growth stages for which thorough coverage can be achieved by spray volumes of 1000 L/ha or less.

Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established.  
 Allow a minimum of 7 days between applications.  
 Do not apply more than 2 applications per crop cycle.

**Mint: Spearmint, Peppermint (7 day PHI)**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	

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 14 days between applications.

Do not apply more than 3 applications per year.

Do not apply more than 0.16 kilograms per hectare Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.

**Greenhouse Grown Ornamentals including Cut Flowers**

PESTS	RATE OF APPLICATION	COMMENTS
Thrips Aphids	0.3 g product/L (30 g product/100 L)	Foliar application. Apply sufficient volume to ensure good coverage, up to 1000 L/ha. The maximum volume should be used when plant foliage is dense. Do not apply more than 1 foliar application per crop cycle.

Whitefly	0.2 g product/L (20 g product/100 L)	Foliar application. Apply sufficient volume to ensure good coverage, up to 1000 L/ha. The maximum volume should be used when plant foliage is dense. Do not apply more than 2 foliar applications per crop cycle. Allow a minimum of 7 days between applications.
Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established.		

**Ornamentals, Outdoor (excluding conifers)**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG Insecticide per Hectare	Kilograms Active Ingredient per Hectare	
Aphids	0.12 to 0.16	0.06 to 0.08	Use higher rates for greater pest populations and/or dense foliage.
<p>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.</p> <p>Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary.</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 0.16 kilograms per hectare Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application. Do not apply more than 0.48 kilograms per hectare Beleaf™ 50SG Insecticide (0.24 kilograms a.i. per hectare) per season.</p> <p>Do not enter or allow worker entry into treated areas for the purposes of performing the re-entry activities of cut flowers hand harvesting, disbudding, or hand pruning during the restricted entry interval of 4 days.</p>			

Ornamental varieties may vary in their tolerance to pest control products, including Beleaf 50SG Insecticide. Since not all ornamental varieties have been tested for tolerance to Beleaf 50SG Insecticide, first use of Beleaf 50SG Insecticide should be limited to a small area of each variety to confirm tolerance prior to adoption as a general field practice. Additionally, consult your seed or plant supplier for information on the tolerance of specific varieties of ornamentals to Beleaf 50SG Insecticide.

Certain pansy cultivars have exhibited sensitivity to flonicamid. Prior to use on pansy, apply flonicamid at the appropriate use rate to a small portion of the pansy crop (about 10 units per cultivar) and visually assess impact 7 to 10 days after application.

**Low Growing Berry (0 day PHI)**

**Crop Subgroup 13-07G**

**Bearberry; Bilberry; Blueberry, lowbush; Cloudberry; Cranberry; Lingonberry; Muntries; Partridgeberry; Strawberry; cultivars, varieties and/or hybrids of these.**

PESTS	RATE OF APPLICATION		COMMENTS
	Kilograms Beleaf™ 50SG 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. Use higher rates for greater pest populations and/or dense foliage.
Suppression 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. Beleaf™ 50SG 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 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.

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 Beleaf™ 50SG Insecticide (0.08 kilograms a.i. per hectare) per application ( up to 3 applications per season).

**For applications to suppress lygus bugs:** Do not apply more than 0.20 kilograms per hectare Beleaf™ 50SG 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. The user assumes the risk to persons or property that arises from any such use of this product.

2015-1531  
2015-05-27

GROUP	9C	INSECTICIDE
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## EMERGENCY USE LABEL

### Beleaf™ 50SG Insecticide

FOR EMERGENCY USE ONLY

For sale and use in British Columbia for control of Lygus bugs on Greenhouse Peppers  
from June 1, 2015 until May 31, 2016.

COMMERCIAL

SOLUBLE GRANULES

READ THE LABEL BEFORE USING

GUARANTEE: Flonicamid 50.0%

Warning, contains the allergens milk and sulfites

Contains 500 grams of Flonicamid per kilogram of formulated product

CAUTION – EYE IRRITANT

REGISTRATION NO: 29796 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

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

**NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:**

The DIRECTIONS FOR USE for this product for the use(s) described below were developed by persons other than ISK Biosciences Corporation and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. ISK Biosciences Corporation itself makes no representation or warranty with respect to performance (efficacy) or crop tolerance (phytotoxicity) claims for this product when used on the crops listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold ISK Biosciences Corporation harmless from any claims based on efficacy or phytotoxicity in connection with the use(s) described below.

**Peppers, Greenhouse (0 day PHI)**

PESTS	RATE OF APPLICATION	COMMENTS
Lygus bugs	30 mg product/m <sup>2</sup> (15 mg ai/m <sup>2</sup> )	Apply using drip irrigation <sup>1</sup> or drench by hand using sufficient water volume to ensure delivery of the product to the roots.

<sup>1</sup>See Chemigation Section, below, for additional information.

Apply before populations reach economic thresholds or as populations begin to increase but before damaging populations become established.

Allow a minimum of 7 days between applications.

Apply no more than 2 applications per crop cycle.



## PRECAUTIONS

### KEEP OUT OF REACH OF CHILDREN

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

May irritate eyes.

Avoid contact with 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.

During mixing, loading, application, and cleanup and repair: worker must wear long sleeve shirt, chemical resistant gloves, and goggles. Applicators must also wear a chemical resistant hat when using open cab airblast/air assisted application equipment.

During application: worker must wear a long sleeve shirt and long pants. Chemical resistant gloves must also be worn when using hand-held application equipment.

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

**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 HAZARDS

Toxic to certain beneficial insects.

TOXIC to non-target terrestrial plants.

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.

### 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.

## **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**

Beleaf™ 50SG Insecticide can be used against the listed pests on greenhouse peppers.

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.

**DO NOT** allow effluent or runoff from greenhouses containing this product to enter lakes, streams, pond or other waters.

### **Mode of Action**

Beleaf™ 50SG Insecticide is a member of the pyridinecarboxamide class of chemistry.

Beleaf™ 50SG Insecticide controls target pests by contact and ingestion provoking rapid and irreversible feeding cessation. Aphids could remain on the plant until they desiccate.

## **Resistance Management**

For resistance management, please note that Beleaf 50SG Insecticide contains a Group 9C insecticide. Any insect population may contain individuals naturally resistant to Beleaf 50SG Insecticide and other Group 9C insecticides. The resistant individuals may dominate the insect population if this group of insecticides are 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 Beleaf 50SG Insecticide or other Group 9C insecticides with different groups that control the same pests in a field. Avoid application of more than 3 consecutive sprays of Beleaf 50SG 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, 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 1-440-357-4640 (Long distance charges apply).

## **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 Beleaf™ 50SG Insecticide spray mixtures.

Premixing Beleaf™ 50SG 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 Beleaf™ 50SG Insecticide.

## **Adjuvant Use Requirements and Precautions**

Beleaf™ 50SG Insecticide should not be used with spray adjuvants.

## **Spray Equipment Clean Out**

After spraying Beleaf™ 50SG Insecticide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned.

## **Chemigation Application**

Apply this product only through drip (trickle) (greenhouse peppers only) irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect any

irrigation system, including greenhouse systems, used for pesticide application to a public water system. Crop injury, lack of effectiveness or illegal residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact Provincial Extension specialists, equipment manufacturers, or other experts. 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.

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 backflow. The pesticide injection pipeline must also 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 interlocking 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. Do not apply when wind speed favors drift beyond the area intended for treatment. Beleaf 50SG should be applied continuously for the duration of the water application. Beleaf 50SG should be diluted in sufficient volume to insure accurate application over the area to be treated. Use the appropriate amount of water to carry the product to the target pest. Agitation generally is not required when suitable diluents are used. A diluents test should be conducted to ensure that phase separation would not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

Using Water from Public Water Systems: **DO NOT APPLY Beleaf 50SG THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM.** 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. Beleaf 50SG may be applied through irrigation systems, which may be **supplied** by a public water system **only if** water from the water system is discharged 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 top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

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