

Container Label

GROUP 21 FUNGICIDE

**RANMAN[®] 400SC AGRICULTURAL FUNGICIDE
COMMERCIAL
SUSPENSION**

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

GUARANTEE: Cyazofamid 34.5 %

Contains 400 grams of Cyazofamid per litre

Contains 1,2-benzisothiazolin-3-one at 0.015% as a preservative
OR

Contains 2-Bromo-2-nitropropane-1,3-diol at 0.007%
and

5-Chloro-2-methyl-4-isothiazolin-3-one at 0.00067%
and

2-Methyl-4-isothiazolin-3-one at 0.00022% as preservatives

REGISTRATION NO: 30716 PEST CONTROL PRODUCTS ACT

Net Contents: 500 ml to 200 L

Registrant
ISK Biosciences Corporation
7470 Auburn Road, Suite A
Concord, Ohio
44077
USA
1-877-706-4640

Distributed By:
Belchim Crop Protection
104 Cooper Drive, Unit 3
Guelph, ON
N1C 0A4
Canada
866-613-3336

RANMAN is a registered trademark of Ishihara Sangyo Kaisha, Ltd.
SYLGARD is a registered trademark of Dow Corning Corporation.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN

DO NOT take internally. Harmful if swallowed.

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, clean up and repair: worker must wear a long sleeved shirt, long pants, chemical-resistant gloves and goggles.

During application: worker must wear a long sleeved shirt and long pants.

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

Toxic to aquatic organisms and non-target terrestrial plants.

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

FIRST AID

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 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 do so by a poison control centre or doctor. Do not give anything by mouth to a 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 eye. 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 mouth-to-mouth if possible. Call a poison control centre or doctor for treatment advice.

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

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

TOXICOLOGICAL INFORMATION

Treat symptomatically.

DISPOSAL

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial/territorial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial/territorial requirements.
5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial 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.

**RANMAN[®] 400SC AGRICULTURAL FUNGICIDE
COMMERCIAL**

SUSPENSION

READ THE LABEL BEFORE USING

GUARANTEE: Cyazofamid 34.5 %

Contains 400 grams of Cyazofamid per litre

Contains 1,2-benzisothiazolin-3-one at 0.015% as a preservative
OR

Contains 2-Bromo-2-nitropropane-1,3-diol at 0.007%
and

5-Chloro-2-methyl-4-isothiazolin-3-one at 0.00067%
and

2-Methyl-4-isothiazolin-3-one at 0.00022% as preservatives

REGISTRATION NO: 30716 PEST CONTROL PRODUCTS ACT

Net Contents: 500 ml to 200 L

Registrant
ISK Biosciences Corporation
7470 Auburn Road, Suite A
Concord, Ohio
44077
USA
1-877-706-4640

Distributed By:
Belchim Crop Protection
104 Cooper Drive, Unit 3
Guelph, ON
N1C 0A4
Canada
866-613-3336

RANMAN is a registered trademark of Ishihara Sangyo Kaisha, Ltd.
SYLGARD is a registered trademark of Dow Corning Corporation.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN

DO NOT take internally. Harmful if swallowed.

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, clean up and repair: worker must wear a long sleeved shirt, long pants, chemical-resistant gloves and goggles.

During application: worker must wear a long sleeved shirt and long pants.

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

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

ENVIRONMENTAL PRECAUTIONS

Toxic to aquatic organisms and 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 of this product 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.

DIRECTIONS FOR USE

Ranman 400SC Agricultural Fungicide can be used in dilute sprays. Thorough, uniform coverage is essential for disease control.

NOTE: Slowly invert container several times to assure uniform mixture before adding to the spray tank.

Dosage rates on this label indicate litres of **Ranman 400SC Agricultural Fungicide** per hectare. Apply **Ranman 400SC Agricultural Fungicide** in sufficient water volume to obtain coverage of the foliage. Spray volume to be used will vary with the amount of plant growth and will range from 200 to 600 litres per hectare. For all foliar applications, **Ranman 400SC Agricultural Fungicide** should be tank-mixed with a non-ionic or organosilicone surfactant (such as Sylgard OFX-0309) at the manufacturer's label recommendations.

The required amount of **Ranman 400SC Agricultural Fungicide** should be added slowly into the spray tank during filling. Keep agitator running when filling spray tank and during spray operations.

TANK MIXING AND COMPATIBILITY

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

Ranman 400SC is generally compatible with other fungicides, insecticides, fertilizers and micronutrient products provided sufficient free water is available for dispersion of all the tank mix products. However, the physical compatibility of this product with tank mix partners must be evaluated before use. Conduct a jar test with intended tank-mix product(s) prior to preparation of large volumes. Use the following procedure: 1) Pour the recommended proportions of the products into a suitable container of water, 2) Mix thoroughly and 3) Allow to stand 5 minutes. If the combination remains mixed or can be re-mixed readily, it is considered physically compatible. Any physical incompatibility in the jar test indicates that **Ranman 400SC** must not be used in the tank-mix. Since not all crop varieties have been tested with all possible tank mix combinations, the combination should also be tested for crop safety on a small portion of the crop to ensure that phytotoxicity will not occur.

In some cases, tank mixing a pest control products can result in reduced pest efficacy or increased host crop injury. The user should contact ISK Biosciences Corporation at 1-877-706-4640 for information before applying any tank mix that is not specifically recommended on this label.

DIRECTIONS FOR USE: AERIAL APPLICATION

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 or a GPS system.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under the 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.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-877-706-4640 or obtain technical advice from the distributor or your provincial/territorial agricultural representative. Application of the specific product must meet and/or conform to the following:

Aerial Spray Volume: Apply the recommended rate in a minimum spray volume of 50 litres per hectare.

Integrated Pest Management

Although **Ranman 400SC Agricultural Fungicide** has limited systemic activity, it should be treated as a protectant fungicide and applied before the disease enters the crop. **Ranman 400SC Agricultural Fungicide** is recommended for use as part of an Integrated Pest Management (IPM) program, which may include the use of disease resistant crop varieties, cultural practices, crop rotation, biological disease control agents, pest scouting and disease forecasting systems aimed at preventing economic pest damage. Practices known to reduce disease development should be followed. Consult your provincial/territorial agricultural authorities for additional IPM strategies established in your area. **Ranman 400SC Agricultural Fungicide** may be used in disease forecasting programs that recommend application timing based upon environmental factors that favour disease development.

Resistance Management

For resistance management, please note that **Ranman 400SC Agricultural Fungicide** contains a Group 21 fungicide. Any fungal population may contain individuals naturally resistant to **Ranman 400SC Agricultural Fungicide** and other Group 21 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

- Where possible, rotate the use of **Ranman 400SC Agricultural Fungicide** or other Group 21 fungicides with different groups that control the same pathogens.
- **DO NOT** make sequential applications of **Ranman 400SC Agricultural Fungicide** or other fungicides in the same group. After one application, alternate **Ranman 400SC Agricultural Fungicide** with at least one application of fungicide having a different mode of action for control of late blight.
- Do not exceed the total number of applications of **Ranman 400SC Agricultural Fungicide** per season per crop as stated in the “Directions for use” section of the label.
- Use tank mixtures with fungicides from a different group that is effective on the target pathogen, when such use is permitted.
- **Ranman 400SC Agricultural Fungicide** use should be based on an integrated disease management program that includes scouting, historical information related to pesticide use and crop rotation and considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications.

- Monitor treated fungal populations for resistance development. Notify ISK Biosciences Corporation if reduced sensitivity of the pathogen to Ranman 400SC Agricultural Fungicide is suspected.
- If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different target site of action, if available.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information and to report suspected resistance, contact ISK Biosciences Corporation at 1-877-706-4640.

Since pathogens differ in their potential to develop resistance to fungicides, follow the directions outlined in the “Directions For Use” section of this label for specific resistance management strategies. Consult with your provincial/territorial agricultural authorities for guidance on the proper use of **Ranman 400SC Agricultural Fungicide** in programs that seek to minimize the occurrence of disease resistance.

<i>Crop</i>	<i>Diseases</i>	<i>Rate/Hectare (Product)</i>	<i>Instructions</i>
Potato	Late blight (<i>Phytophthora infestans</i>)	Ground: 0.1 to 0.2 L in 200 to 600 L of water per hectare Aerial: 0.1 to 0.2 L in a minimum of 50 L water per hectare	Resistance Management: DO NOT apply more than six applications of Ranman 400SC Agricultural Fungicide per crop per year. DO NOT make sequential applications of Ranman 400SC Agricultural Fungicide or other fungicides in the same group. After one application, alternate Ranman 400SC Agricultural Fungicide with at least one application of fungicide having a different mode of action for control of late blight. Application instructions: For late blight control, make Ranman 400SC Agricultural Fungicide applications on a 7 day schedule beginning when warning systems forecast disease infection periods, generally at row closure or when conditions are favorable for disease development. Use the low rate (0.1 L product/ha) for preventative applications or very low disease pressure, increasing the rate as disease pressure and/or fast crop development increases, up to the maximum rate (0.2 L product/ha). For late blight tuber rot control, ensure that the last 2 to 3 applications of Ranman 400SC Agricultural Fungicide prior to desiccation are made

			<p>at the maximum rate (0.2 L product/ha) following resistance management practices.</p> <p>Ranman 400SC Agricultural Fungicide should be tank-mixed with a non-ionic or organosilicone surfactant (such as Sylgard OFX-0309) at the manufacturer's label recommendations. Spray volume to be used will vary with the amount of plant growth and will range from 200 to 600 litres per hectare for ground applications and a minimum of 50 litres per hectare for aerial applications.</p> <p>DO NOT apply within 7 days of harvest.</p> <p>A plant back interval of 30 days is required.</p>
--	--	--	--

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.

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 American Society of Agricultural Engineers (ASAE) fine/medium/coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

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.

Spray Buffer Zones

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

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), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of application	Crop		Spray Buffer Zones (metres) Required for the Protection of:				
			Freshwater Habitat of Depths:		Estuarine/Marine Habitats of Depths:		Terrestrial habitat
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	Potato		1	0	1	1	1
Aerial	Potato	Fixed wing	1	0	1	1	20
		Rotary wing	1	0	1	1	15

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.

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.

FIRST AID

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 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 do so by a poison control centre or doctor. Do not give anything by mouth to a 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 eye. 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 mouth-to-mouth if possible. Call a poison control centre or doctor for treatment advice.

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

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

TOXICOLOGICAL INFORMATION

Treat symptomatically.

DISPOSAL

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial/territorial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial/territorial requirements.
5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial 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.