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# Buran

Biological Fungicide and Bactericide for control of powdery mildew in apple, crab apple, pear and quinces; suppression of scab in apple, crab apple, and pear; control of fire blight and suppression of blossom blight in apple, crab apple, pear, quinces, raspberries, blackberries and Saskatoon berries; and suppression of powdery mildew in grapevine, squash and cucumber (crop subgroup 9B)

**COMMERCIAL**

SOLUTION

**ACTIVE INGREDIENT:** Garlic powder.....15%

**REGISTRATION NUMBER 30601.....PEST CONTROL PRODUCTS ACT**

**READ THE LABEL BEFORE USING**

**POTENTIAL SENSITIZER  
CAUTION EYE IRRITANT  
CAUTION SKIN IRRITANT**

**Net Contents: 10 litres**

**Manufactured by:  
AEF Global inc.  
440, 3e avenue, suite 100  
Lévis, Qc, Canada G6W 5M6 (418) 838-4441  
Toll free help-line: 1-866-622-3222  
[www.aefglobal.com](http://www.aefglobal.com)**

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#### **DIRECTIONS FOR USE:**

**Buran is a liquid formulation containing garlic powder as the active ingredient. Buran is a biological fungicide and bactericide for control of powdery mildew in apple, crab apple, pear and quinces; suppression of scab in apple, crab apple, and pear; control of fire blight and suppression of blossom blight in apple, crab apple, pear, quinces, raspberries, blackberries and Saskatoon berries; and suppression of powdery mildew in grapevine, squash and cucumber (crop subgroup 9B). Control of powdery mildew in apple, crab apple, pear and quince can be achieved under low to moderate disease pressure. Repeat applications and thorough coverage of target foliage are required to maintain disease protection. Refer to the "Crop-specific directions for use" table for additional information.**

**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) fine/medium/coarse classification. Boom height must be 60 cm or less above the crop or ground.

**Air blast application:** DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with 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.

The pre-harvest interval (PHI) is 0 (zero) day.

#### **MIXING PROCEDURES**

**Foliar application:** Dilute **Buran** with clean water. Add the recommended amount of **Buran** to the required amount of water in the spray tank. Agitate as necessary to maintain suspension. Avoid application when significant rainfall is imminent. For early morning application, foliage should not be wet with dew to the point of runoff.

Buran 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.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact AEF Global Inc.

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technical services at [servtechserv@aefglobal.com](mailto:servtechserv@aefglobal.com) for information before applying any tank mix that is not specifically recommended on this label.

Do not mix or apply Buran with *Aureobasidium pullulans*, Streptomycin or Kasugamycin. AEF Global recommends conducting a jar test with any product mixes before any tank mix.

**Crop-specific directions for use:**

<b>GRAPEVINE</b>		
<b>Disease</b>	<b>Level of protection</b>	<b>Instructions</b>
Powdery mildew ( <i>Erysiphe necator</i> )	Suppression	Apply at a rate of 18 L/ha in a spray volume sufficient to ensure thorough coverage of target foliage.  Subsequent applications may be made every 7-14 days if conditions remain conducive to disease development.

<b>ORCHARDS</b>			
<b>Crop</b>	<b>Disease</b>	<b>Level of protection</b>	<b>Instructions</b>
Apple trees/Crab apple	Apple scab ( <i>Venturia inaequalis</i> )	Suppression	Apply at a rate of 1.8% in a minimal spray volume to obtain complete coverage (e.g. 9 L in 500 L of water). The maximum rate of product in a single application is 18 L/ha.  This product does not have protectant activity. It should be used as a post-infection treatment, applied after rainfall or when conditions are conducive to disease development. The treatment should be conducted before 350 degree hours (base 0°C) after the beginning of the infection.

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	Powdery mildew ( <i>Podosphaera leucotricha</i> )	Control	<p>Disease control can be achieved under low to moderate disease pressure.</p> <p>Begin applications when conditions are conducive to disease development. Subsequent applications may be made every 7-10 days if conditions remain conducive to disease development.</p> <p>Apply at a rate of 9 L in 500 to 800 L of water per hectare with the addition of a registered non-ionic surfactant such as Agral 90 or Ag-Surf at a rate of 0.1% to improve the spreading.</p>
	Fire blight ( <i>Erwinia amylovora</i> ):	Control	<p>Apply before wetting events when conditions are conducive to infection; reapply as needed.</p>
	Blossom Blight	Suppression	<p>Apply at a rate of 1.4% (500 to 800 L of water per hectare); the addition of a registered non-ionic surfactant such as Agral 90 or Ag-Surf at a rate of 0.1% could help to improve the coverage.</p>

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Pear trees	Pear scab ( <i>Venturia pirina</i> )	Suppression	<p>Apply at a concentration of 1.8% in a minimal spray volume to obtain complete coverage (e.g. 9 L in 500 L of water). The maximum rate of product in a single application is 18 L/ha.</p> <p>This product does not have protectant activity. It should be used as a post-infection treatment, applied after rainfall or when conditions are conducive to disease development. The treatment should be conducted before 350 degree hours (base 0°C) after the beginning of the infection.</p>
Pears, Quinces	Powdery mildew ( <i>Podosphaera leucotricha</i> )	Control	<p>Disease control can be achieved under low to moderate disease pressure.</p> <p>Begin applications when conditions are conducive to disease development. Subsequent applications may be made every 7-10 days if conditions remain conducive to disease development..</p> <p>Apply at a rate of 9 L in 500 to 800 L of water per hectare with the addition of a registered non-ionic surfactant such as Agral 90 or Ag-Surf at a rate of 0.1%.</p>

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Pears, Quince	Fireblight ( <i>Erwinia amylovora</i> ):	Control	Apply before wetting events when conditions are conducive to infection; reapply as needed.
	Blossom blight	Suppression	Apply at a rate of 1.4% (500 to 800 L of water per hectare); the addition of a registered non-ionic surfactant such as Agral 90 or Ag-Surf at a rate of 0.1% could help to improve the coverage.

<b>RASPBERRIES AND BLACKBERRIES AND SASKATOON BERRIES</b>			
<b>Crop</b>	<b>Disease</b>	<b>Level of protection</b>	<b>Instructions</b>
Raspberries, blackberries, Saskatoon berries	Fire blight ( <i>Erwinia amylovora</i> ):	Control	Apply before wetting events when conditions are conducive to infection; reapply as needed.
	Blossom blight	Suppression	Apply at a rate of 1.4% (500 to 800 L of water per hectare); the addition of a registered non-ionic surfactant such as Agral 90 or Ag-Surf at a rate of 0.1% could help to improve the coverage.

<b>CROP SUBGROUP 9B: SQUASH/CUCUMBER SUBGROUP INCLUDING PUMPKINS, WINTER AND SUMMER SQUASH</b>		
<b>Disease</b>	<b>Level of protection</b>	<b>Instructions</b>
Powdery mildew ( <i>Sphaerotheca fuliginea</i> syn. <i>Podosphaera xanthii</i> , <i>Erysiphe cichoracearum</i> )	Suppression	Use at the rate of 1.8%. Do not exceed 18 L/ha. Ensure thorough coverage. Repeat applications at 7-10 day intervals to maintain disease reduction.  Subsequent applications may be made every 7-10 days if conditions remain conducive to disease development.

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## **PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN**

May cause eye irritation.

May cause skin irritation.

May cause skin sensitization.

Avoid contact with skin, eyes or clothing. Avoid breathing spray mists. May cause respiratory irritation.

Wear a long-sleeved shirt, long pants, water-proof gloves, shoes plus socks, and eye goggles when handling, mixing/loading or applying the product, and during all cleanup/repair activities.

Applicators using a power sprayer must wear a bayonet-style cartridge respirator (for particulates) equipped with at least an N-95, R-95, P-95 or HE filter.

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 inversion, application equipment and sprayer settings.

Individuals who are sensitive or allergic to garlic should avoid handling the product. Individuals who are sensitive or allergic to garlic should avoid treated areas until dry or after a heavy rain.

DO NOT re-enter or allow entry into treated areas until the spray is dried.

The handling and loading of **Buran**, as well as the clean-up and maintenance activities should be performed in a well ventilated area.

Keep unprotected persons out of the treated areas for the duration of the treatment period.

### **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 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.

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**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.

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**STORAGE:**

Store containers tightly closed, out of direct sunlight, at temperatures between 4 °C and 20 °C. Cooler storage temperatures are preferred.

To prevent contamination store this product away from food and feed.

**DISPOSAL**

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial 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 requirements.
5. 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.