Post-harvest treatment

Chrysal Alesco® *– Ethylene Inhibitor for Potted Plants*

Overview: Chrysal Alesco® is a powerful post-harvest spray treatment developed for ethylene-sensitive potted plants. It helps protect ornamental plants against internal and external ethylene stress, reducing petal shatter, bud abortion, and leaf yellowing. Ideal for professional growers to extend the retail shelf life and overall quality of potted plants.

Key Benefits:

- Reduces flower petal shatter, bud abortion, and leaf yellowing.
- Extends retail shelf life up to 3 weeks (depending on plant type and conditions).
- Enhances flower longevity, appearance, and marketability.
- Works effectively on a wide range of popular potted plant varieties.

Convenient Application:

- For use by growers prior to shipment.
- Available in 200 ml bottles (treats approx. 1 acre).
- One bottle premeasured for 50-gallon (200 L) tank mix.

Cost Efficiency & Quality Assurance:

- Reduces flower and plant wastage.
- Extends shipping and selling periods.
- Prevents ethylene-related damage during transport.
- Delivers consistent performance across species.

Usage Instructions:

1. Dip each sachet in tap water.
2. Place the wetted sachets in the flower or plant box.
3. Immediately close the box to contain the treatment.
4. Keep the treatment area closed for at least 4 hours for full effect (During storage or shipping).

Usage Recommendations:

- **Dosage:** 1 ml per liter (quart) of water.
- **Application:** Spray until run-off 1 to 2 days prior to shipment. For best results, also spray 8–14 days before shipping.
    - Apply on mature plants fully covering the ground surface.
    - Avoid spraying in direct sunlight or before leaves are dry.
    - Conduct small-scale testing before large-scale application.
- **Solution Reuse:** Diluted solution may be used for up to 3 days. Do not mix residual solutions with freshly made ones.

T542 / US / v2505

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- **Storage:** Store in cool, dark conditions (45°F – 75°F / 7°C – 24°C).
- **Shelf Life:** 24 months in sealed packaging.
- **Disposal:** Collect any excess spray and leftover solution; neutralized before disposal. The deposit containing the silver should be treated and disposed of as chemical waste.

Test Results Alesco®

Pinto™ Premium Rose Bicolor Geranium – Syngenta Flower Trial Results – Day 4

Control (no treatment)

Alesco®

After two days of simulated shipping in darkness, untreated plants exhibited significant petal shatter, whereas plants treated with Alesco® showed no petal drop, maintaining optimal bloom integrity.

Pinto™ Premium Rose Bicolor Geranium – Syngenta Flower Trial Results – Day 14

Control (no treatment)

Alesco®

1.5 weeks after shipping, untreated plants experienced petal shatter, leaf yellowing, and bud abortion. In contrast, Alesco®-treated plants maintained intact inflorescences with no flower petal drop—the petals simply dried naturally on the plant.

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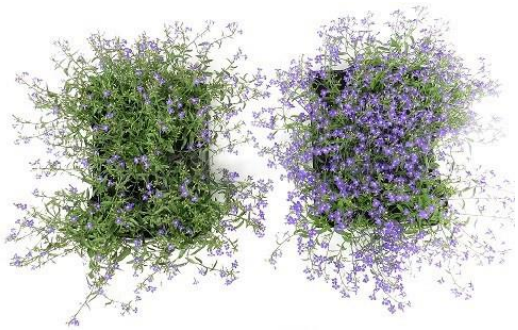
Maverick™ Scarlet Picotee Geranium – Syngenta Flower Trial Results

Control (no treatment) Alesco®

Alesco® extended retail shelf life by over 3 weeks, significantly reducing petal shatter, bud abortion, and leaf yellowing.

Techno™ Heat Upright Dark Blue Lobelia – Syngenta Flower Trial Results



Control (no treatment) Alesco®

Dekko™ Sky Blue Petunia – Syngenta Flower Trial Results

Control (no treatment) Alesco®

Two weeks after shipping, untreated plants had aborted all flower buds, whereas plants treated with Alesco® continued flowering and remained saleable. Alesco® effectively reduced flower meltdown and bud abortion—key entry points for Botrytis infection.

Synergy with Other Products:

- Improved shelf life observed when used in combination with Chrysal LeafShine & Seal.

Environmental Considerations:

- Follow silver recovery and disposal instructions carefully.
- Avoid spraying in areas with food, feed, or direct human contact.

Hibiscus – Day 14

Control (no treatment)

Alesco®

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Campanula 'Anbella Purple' – Day 11

Control (no treatment)

Alesco®

Alesco® + Chrysal LeafShine & Seal

Regulatory Note:

Alesco® is registered in 40+ U.S. states, including

Alabama	*Indiana*	*New Mexico*	*South Dakota*
Arizona	*Iowa*	*New York*	*Tennessee*
California	*Maine*	*North Carolina*	*Texas*
Colorado	*Maryland*	*Ohio*	*Utah*
Connecticut	*Massachusetts*	*Oklahoma*	*Vermont*
Delaware	*Michigan*	*Oregon*	*Virginia*
Florida	*Minnesota*	*Pennsylvania*	*Washington*
Georgia	*New Hampshire*	*Rhode Island*	*Wisconsin*
Illinois	*New jersey*	*South Carolina*	

Additional states can be registered based on demand. Registration takes 4 – 8 weeks. Please feel free to contact Chrysal USA, www.chrysal.com, for more information.

Alesco® is a reliable ethylene protection treatment trusted by growers to maintain top-quality plants through storage, shipping, and retail.

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Alesco® – Test Protocol

Interested in testing the effectiveness of Alesco®? Follow this clear, step-by-step protocol to evaluate its protective impact against ethylene damage on plants.

Background

Ethylene, a plant hormone, triggers aging symptoms in flowers and plants, such as leaf drop, bud and flower loss, wilting, and fruit ripening. Damage severity increases with higher temperatures, prolonged ethylene exposure, or increased ethylene concentrations.

Ethylene sources include:

- **External Ethylene:** Fruits, aging flowers, polluted air, exhaust fumes, and insulation materials in trucks or buildings.
- **Internal Ethylene:** Generated by plants during stress conditions, including prolonged darkness, transportation movements, or significant temperature fluctuations.

Materials Required

- 4 sealable boxes
- Ethylene source (optional for quicker results), e.g., bananas or tomatoes
- Alesco®
- Measuring cylinder or pipette
- Plants (minimum of 6 uniform plants per treatment group)

Test Setup

Box No.	Contents	Treatment
1	No fruit	None (Control)
2	No fruit	Alesco® 1 ml/L
3	Fruit (3-5 pcs)	None (Control)
4	Fruit (3-5 pcs)	Alesco® 1 ml/L

Test Procedure

1. **Plant Preparation:**
   - Fully saturate the soil with water.
   - Label each plant clearly based on its designated treatment.
2. **Solution Preparation:**
   - Mix solution thoroughly: 1 ml of Alesco® per liter of water.
   - Spray solution evenly on plants until runoff.
   - Allow plants to dry completely (may take up to 4 hours, depending on humidity).
3. **Internal Ethylene Stress Test:**
   - Option A: Place plants in sealed boxes without light at 68°F (20°C) for 7 days.

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- Option B: Expose plants to significant temperature changes: 1 day at 46–50°F (8–10°C), followed by 3 days at 64–68°F (18–20°C).

4. **External Ethylene Exposure:**
   - Add ripening fruit (3–5 pieces per box) to designated boxes.
5. **Testing Period:**
   - Keep boxes sealed and undisturbed for approximately 7 days.
6. **Post-Test Assessment:**
   - After 7 days, transfer plants to a climate-controlled room (approximately 68°F/20°C, 60% relative humidity), ensuring identical conditions (light, airflow) for all treatment groups.
   - Observe plants daily, noting flower opening, leaf drop, leaf yellowing, bud loss, and overall shelf life.
   - Document observations with photographs for comparison.
7. **Result Analysis:**
   - Compare treated plants (Alesco®) with untreated control plants.
   - Re-water plants if necessary, during the observation period.

Usage Calculation (Optional)

To calculate Alesco® consumption:

1. Record initial solution volume.
2. After treatment, measure remaining solution.
3. Calculate used volume, then divide by the number of plants treated.

Example:

Start	1000 ml	
Remaining	660 ml	
Used RTU	340 ml	per 45 plants -> 7 ml / plant

Observed Results Example

After 2 days of simulated shipping (darkness), untreated plants exhibited significant petal shatter, whereas plants treated with Alesco® had no petal drop.

By following this protocol, you can accurately assess the efficacy of Alesco® against ethylene-induced damage.

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