



BLUSH™ APPLICATION GUIDELINES

Blush™ contains 50 grams of prohydrojasmon (propyl-3-oxo-2-pentylcyclo-pentylacetate) per liter. Use properly calibrated spray equipment to ensure uniform coverage of fruit and foliage. Adjust water volumes based on tree size and spacing.

- Make 1-2 applications of 26 to 52 fluid ounces per acre per year at 7- to 14-day intervals, 7 to 42 days prior to harvest.

Dilution Guide for Blush™

Parts Per Million	100 ppm	125 ppm	150 ppm	175 ppm	200 ppm
Fluid Ounces of Product Per 100 Gallons of Water	26	32.5	39	45.5	52

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- Product efficacy requires that apples receive thorough spray coverage.
- Excessive spray volumes may reduce product performance. Do not apply in spray volumes greater than 100 GPA.
- Apply in conditions conducive to slow drying, i.e. morning or evening.
- Do not use overhead cooling or irrigation for at least 8 hours following application.
- Do not apply Blush™ to trees that are injured or under stress from excessive heat, drought, disease, nutrient deficiency, etc.
- Refer to the Experimental Use Permit label, including all precautions and restrictions, before handling, mixing or applying Blush™.

EUP Restrictions

- Blush™ is registered for experimental use only in the states of California, Michigan, New York, North Carolina, Pennsylvania and Washington.
- Blush is not for sale to any person other than a participant or cooperator of the EPA-approved Experimental Use Program.
- The Experimental Use Permit product label must be in the possession of the user at the time of application for use only at an application site of a cooperator and in accordance with the terms and conditions of the experimental program. Read safety directions before opening.

Always read and follow label directions. Blush™ is a trademark of Fine Agrochemicals Limited.
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Excellence in PGR Technology

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blush™

TECHNICAL INFORMATION BULLETIN





BLUSH™ PRODUCT OVERVIEW



Blush™ is a new plant growth regulator developed to promote color change in bi-color apples, thereby improving the commercial value of the crop. While performance depends on cultivar, orchard conditions and application timing, Blush™ has shown positive results in orchards trials from New York to Washington across a wide range of apple varieties.

Active Ingredient

Blush™ contains 5.25% prohydrojasmon (PDJ), a synthetically produced jasmonate. PDJ is known to act as a functional analogue of jasmonic acid (JA) in plants.

Jasmonates are considered to be a new group of plant hormones with several beneficial physiological properties, including:

- **Fruit de-greening:** JA enhances chlorophyll degradation within plants (Fan and Mattheis, 1999).
- **Fruit color development:** JA enhances anthocyanin and carotene accumulation within fruit (Rudell et al., 2002).
 - Anthocyanins are red pigments that belong to a class of molecules called flavonoids.
 - In addition to their role in fruit coloration, anthocyanins also act as powerful antioxidants

PDJ has been reported to be up to 10 times more active than methyl jasmonate, probably due to its higher chemical stability. It is currently registered for use in several countries, including Japan, Taiwan and Korea.

In 2007, Fine Americas Inc. initiated efficacy trials evaluating the effect of Blush™ on fruit color enhancement in apples and grapes. In 2010, an Experimental Use Permit for Blush™ on apples was approved by the U.S. Environmental Protection Agency, allowing for non-crop destruct trials.

Full Section 3 federal registration of Blush™ is expected for the 2014 use season. Upon registration, Blush™ will be classified as a bio-pesticide.



BLUSH™ TRIAL RESULTS

University and private cooperators throughout the United States have tested Blush™ on a number of popular apple varieties. The following trial results are indicative of the performance seen in those trials.

