

MIXING AND MEASURING

Due to the small amount of **piccolo** in terms of ppm required to regulate growth in many plant species, mixing and measuring is very important. By following the procedure outlined below for a spray application, as an example, you can measure and mix the same rate for the correct volume every time.

1. Use a sprayer which is dedicated to PGR use only
2. Ensure the spray tank is clean and is not contaminated with other material
3. Fill the spray tank with half the required volume of clean water
4. Check the label for the ppm rate recommended for the plant type you are going to treat
5. Determine the amount of **piccolo** needed for the required ppm concentration using the dilution table below

Dilution table

piccolo (ppm)	fl. oz / gallon	ml / gallon
1	0.032	1.0
2	0.064	1.9
3	0.096	2.8
4	0.13	3.8
5	0.16	4.7
10	0.32	9.5
20	0.64	19.0
25	0.8	24.0
30	1.0	28.0
40	1.3	38.0
50	1.6	47.0
100	3.2	95.0
200	6.4	190.0

6. Wearing the proper personal protective equipment listed on the product label, measure the required amount of **piccolo** and add it to the tank.
7. Fill the spray tank with the remaining amount of water required to achieve the correct concentration.
8. Agitate the mixture frequently to assure the uniform distribution of **piccolo** in the water.

Note: delivering the correct amount of **piccolo** to your plants is very important. If at anytime you are unsure of your calculations, measurements or sprayer calibrations, start over.

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Fine - Excellence in PGR Technology

Fine Americas, Inc., Walnut Creek, CA, is a wholly-owned subsidiary of Fine Holdings, Ltd., a UK-based company with over 20 years experience in the use and development of plant growth regulators.

Fine focuses on the development and marketing of plant growth regulators for fruits, vegetables and ornamental crops. **Fine** strives to improve plant growth regulator technology to meet the exacting demands of today's growers.

Product quality is of paramount importance to **fine**. Strict controls are in place to ensure that all products are of the highest possible quality. **Fine** was one of the first agricultural companies to achieve ISO9001 accreditation in 1992. ISO (International Organization for Standardization) is the world's largest developer of standards. ISO ensures conformity of products and provides assurance on product quality, safety and reliability.

Fine is committed to helping growers produce top quality crops in line with its customers' needs. **Fine** currently develops and markets its products in more than 40 countries worldwide. An ongoing program of investment designed to develop new products and enhance product value will further **Fine's** reputation as a world leader in the field of plant growth regulation.

USE PESTICIDES SAFELY: READ THE LABEL BEFORE USE

Piccolo contains 0.4% paclobutrazol.
Piccolo is a registered trademark of Fine Agrochemicals Limited.

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PRECISION GROWTH CONTROL

25 fine ANNIVERSARY 1983-2008
25 years of proven performance

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Excellence in PGR technology

Piccolo, the high quality paclobutrazol growth regulator

piccolo®

- labeled for use on a broad range of ornamental plants
- provides the best value for ornamental production
- added convenience of quart and gallon packs
- produced by **fine**, the PGR experts

Benefits

Piccolo helps growers manage the growth and development of ornamental plants in order to meet the increasingly stringent needs of their customers.

Piccolo helps to develop more compact and sturdier plants which are easier for shipping and handling.

Mode of Action

Piccolo works by reducing internode elongation through the inhibition of gibberellin biosynthesis, generating more compact plants. **Piccolo** enhances the quality and color of bedding plants, flowering and foliage plants, bulb crops, perennials and woody ornamentals making them more marketable and profitable to produce.

Crops and Uses

Piccolo can be effectively used on a wide range of both annual and perennial plants.

Always consult the **piccolo** label for detailed use instructions. For additional information, contact your local distributor or **fine** representative.

Piccolo can be applied as a spray, drench, liner dip or preplant bulb soak. Herbaceous species tend to require lower rates than woody species.

For **piccolo** rates and use instructions on plants not specifically listed, please refer to the "Determining Optimum Rates" section of the product label.

CROP	USE
Florist azaleas	To control plant height, reduce bypass shoot development and promote flower bud initiation
Bedding plants	To promote plant density and uniformity, increase branching and to produce darker green foliage and more flowers
Bedding plant plugs	To keep plants compact while in plug trays
Bulb crops	To control height in flowering ornamentals grown from bulbs, corms or tubers
Pot chrysanthemums	To control height and reduction of 'late stretch'
Geraniums	To control plant height, reduce flower stem elongation and to promote flowering
Hibiscus	Control of plant height
Perennials	Control of plant height
Poinsettias	To produce stronger cuttings from stock plants. To produce fuller, more compact plants during production
Woody plants	Control of excessive vegetative growth, improve plant form and promotion of axillary shoot growth and development of flower buds in some species

CONSIDERATIONS IN DETERMINING RATES AND TIMING

For best results it is important to follow procedures for measuring, mixing and applying **piccolo**. Improper product use can result in overly stunted plants.

In addition to application errors, other factors can affect the response of a plant to **piccolo**. Differences in environment, varieties and cultural factors may cause a variation in the amount of **piccolo** required to provide desired results.

Environment
Temperature is one the most important considerations when determining optimum rates of **piccolo**. In higher temperatures there is a greater level of natural stem elongation. Plants grown under warm conditions generally require higher rates and/or multiple applications of **piccolo** as compared to plants grown under cool conditions.

Varieties
Different varieties and cultivars may require different rates of **piccolo**. Shorter, slower growing varieties in general require lower rates than taller, faster growing varieties. Information on plant vigor should be sought from seed suppliers prior to the use of **piccolo** on newly released varieties.

Cultural factors
Higher rates of **piccolo** may be required when plants are grown under close spacing or when high levels of water and/or fertilizer are applied. When plants are grown in high organic content media, especially bark, then these plants may require higher rates of **piccolo** if it is applied as a drench.

Expected results
Generally, lower rates will increase the tone and coloration of the plants foliage. Middle rates will provide increased height control, while higher rates may hold plants height much longer.

APPLICATION METHODS

Conducting trials
Optimum **piccolo** rates will vary between growers and will depend on the desired final plant height, growing conditions, applications techniques, species, and variety or cultivar (see above). Growers should conduct trials with small numbers of plants using the recommended rates to determine the optimum rates for their situations before **piccolo** is applied to a large number of plants. Growers may find they have to adjust application rates, techniques, timings and treatment periods to achieve their desired effect.

- The rates recommended on the label are rate ranges and should be used only as guidelines.
- Always start trials at the lowest recommended rate and work up as required.
- Do not exceed the recommended maximum labeled rate.

For plant species not specifically listed on the label, growers should run initial trials using the rates recommended in the following table.

Recommended trial rates (ppm) by general plant type*

Plant Type	Spray	Drench	Bulb Soak
Bedding Plants	30	1	N/A
Bedding Plant Plugs	5	NR	N/A
Flowering/Foliage Plants (annual or perennial)			
- Herbaceous Species	30	1	N/A
- Woody Species	50	2	N/A
Woody Landscape Plants	100	4	N/A
Bulb Crops	100	10	20 (@ 15 min.)

NR - use not recommended. N/A - use is not applicable.

* These trial rates are based on use in the Sunbelt Region. Growers in regions north of the Sunbelt should run initial tests using 0.5 x the recommended rates listed.

HOW TO APPLY PICCOLO

Spray applications
Generally the spray volume for plants in small containers or plug trays which are closely spaced should be 1-2 qts./100 sq. ft. of bench space. For larger plants with a well developed canopy, a spray volume of 3 qts./100 sq. ft. of bench space is recommended.

Sequential applications using 50-100% of the lowest recommended application rate can provide more uniform growth effects and also prevent overdosing. This is particularly true when cooler temperatures or lower light conditions occur.

It is important that the target plants are well covered with a uniform spray application. However, excessive spray solution to heavy run off is not recommended since **piccolo** is active through the roots as well as the stem.

The drying time for **piccolo** is 30 minutes.

Drench applications
Drench applications of **piccolo** can be the most effective method in reducing plant height and producing a uniform effect. Drench applications can be made, without phytotoxic effects, late in the growing cycle, at a point that marketable size is reached.

Drench Volume Guidelines and Conversations

Pot Diameter	Drench Volume	mg. ai. piccolo/pot			
(inches)	(fl. oz/pot)	1 ppm	2 ppm	3 ppm	4 ppm
4	2	0.063	0.125	0.188	0.250
5	3	0.094	0.188	0.282	0.375
6	4	0.125	0.250	0.375	0.500
8	10	0.313	0.625	0.938	1.250
10	25	0.783	1.560	2.350	3.125
10 (hanging bskt)	15	0.470	0.939	1.410	1.878
12	40	1.250	2.500	3.750	5.000

Note: The recommended drench volumes are based on the soil capacity of a common 6-inch 'azalea-type' pot. Extrapolating the recommendation for this 6 inch 'azalea-type' pot to smaller or larger containers may not be correct for the total drench volume but should only be used as a guideline. The user must determine the appropriate rate and drench volume needed to achieve the desired result, based on both the pot size and potting medium used.

Preplant bulb soaks
Bulb soak applications of **piccolo** are extremely effective but rates and soaking times need to be adjusted according to species and variety.

Liner dip
Applying **piccolo** by liner dip involves dipping the roots and media of seedling plugs or rooted cuttings in a treated solution prior to transplanting into the final container. Pre-transplant liner dip applications of **piccolo** can be effective in reducing the height of very vigorous plants that tend to grow rapidly, following transplant. Liner dip applications also allow the use of variable **piccolo** rates within single mixed-plant containers, thereby providing greater plant growth uniformity.

Due to the number of factors that can result in treatment variability, including soil moisture, light level, growing conditions, plant cultivar, root development and desired degree of growth control, optimum **piccolo** rates will vary. The key to ensuring consistency in results is to develop a practical system to standardize as many factors as possible, including media moisture level, duration of dip, age of cuttings and length of time between treatment and transplant. Conduct initial trials using the rates and recommendations described in the **piccolo** product label.