

PM 23

100-691

8/18/97

1/30

18 U.S. 1997

Ms. Karen S. Stumpf
Novartis Crop Protection, Inc.
P.O. Box 18300
Greenboro, North Carolina 27419-8300

Subject: Pennant® Liquid Herbicide
EPA Registration No. 100-691
Your Letter Dated January 22, 1996, Metolachlor RED
Product Specific Data Call-In, 8-Month Response,
Application for Reregistration; Submission of
Revised Confidential Statement of Formula (CSF),
Resubmission of Labeling, Your Letter Dated
August 11, 1997

Thank you for calling our attention to our error in stamping the incorrect label and confusing the labeling submitted in response to the Metolachlor RED. We also thank you for resubmitting the labeling that you had submitted with your 8 month response to the RED. The comments in our letter of August 1, 1997 are not germane and do not require your response. This letter is in response to the labeling submitted in your August 11, 1997 letter.

The proposed labeling revisions have been reviewed and found to be acceptable as amendments to the registration of the subject pesticide product under FIFRA, provided that you:

- o Submit one (1) copy for the final revised printed labeling before you release the product for shipment under the revised label (note required changes indicated above).

If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA, section 6(e). Your release for shipment of the product under this label constitutes acceptance of this condition.

BEST AVAILABLE COPY

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

3/30

-2-

The subject pesticide product is eligible for reregistration. You should submit revised labeling with current company name and addresses, and any other appropriate changes to update the labeling and Confidential Statement of Formula to allow for this process to take place.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Enclosure

E.Wilson: Diskette Metolachlor:08-01-97

BEST AVAILABLE COPY

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

3/28

RED
(Front Label)

Pennant®

LIQUID HERBICIDE

For weed control in nurseries, turf, and landscape plantings.

Active Ingredient:

Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)- N-(2-methoxy-1-methylethyl) acetamide	.86.4%
Inert Ingredients:	13.6%
Total:	100.0%

Pennant Liquid contains 8 lbs. active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-691

EPA Est. 42761-MS-1^R
EPA Est. 5905-GA-01^H
EPA Est. 11773-IA-01^W

ACCEPTED
with COMMENTS
In EPA Letter Dated

AUG 18 1997

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

100-691

(Superscript is first letter of lot number on
jug (gallon)
bottle (quart and 4 fl. oz.)

One Gallon
U.S. Standard Measure

One Quart
U.S. Standard Measure

4 fl. oz.
U.S. Standard Measure

This booklet manufactured using post-consumer, recycled paper.

CGA -- 1 gal.
CGA - 1 qt.
CGA - 4 fl. oz.

[QUARK/PENNANT/PENNANT-LIQ-A] - ccc - 8/6/96

4/30

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and the **Conditions of Sale and Warranty** before using this product. If terms are not acceptable, return the unopened product container at once.

Conditions of Sale and Warranty

The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of Ciba-Geigy or the Seller. All such risks shall be assumed by the Buyer.

Ciba-Geigy warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use** subject to the inherent risks referred to above. **Ciba-Geigy makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Ciba-Geigy or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Ciba-Geigy and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing **Conditions of Sale and Warranty**, which may be varied only by agreement in writing signed by a duly authorized representative of Ciba-Geigy.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls over short-sleeved shirt and short pants
- chemical-resistant gloves, such as barrier laminate or viton
- chemical-resistant footwear plus socks
- chemical-resistant headgear for overhead exposure

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter the treated area until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, AND/OR ILLEGAL RESIDUES.

General Information

Pennant Liquid Herbicide controls many annual grasses, certain broadleaf weeds, and yellow nutsedge.

Pennant Liquid may be used on commercial and residential turf and other non-crop land including, but not limited to: airports, roadsides, golf courses, sports fields, public recreational areas, ornamental gardens, cemeteries, and other landscaped areas. Pennant Liquid may also be used in and around container and field-grown ornamentals, nonbearing nursery stock and on sod farms.

DO NOT USE IN GREENHOUSES OR OTHER ENCLOSED STRUCTURES.

Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas.

To prevent off-site movement due to runoff or wind erosion.

1. Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
2. Do not apply to impervious substrates such as paved or highly compacted surfaces.
3. Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

NOTICE TO USER: Plant tolerances to Pennant Liquid Herbicide have been found to be acceptable in the specific genera and species listed on this label. Because of the large number of species and varieties of plants, it is impossible to test each for tolerance to Pennant Liquid. Neither the manufacturer nor the seller has determined whether or not Pennant Liquid can be used safely on plants not specified on this label. Therefore, the professional user should determine if Pennant Liquid can be used safely by testing the recommended rates on a particular group of similar unlabeled ornamental plants in a small area before widespread use or by checking with the local weed specialist for guidance. Likewise, if the professional user plans to apply Pennant Liquid for control of weed species not listed on this label, Pennant Liquid should be tested on a small-scale basis before widespread use or the local weed specialist contacted for guidance.

Mixing Instructions

Pennant Liquid Alone: Mix Pennant Liquid with water or fluid fertilizer and apply as a spray. Fill the spray tank $\frac{1}{2}$ - $\frac{3}{4}$ full with water or fluid fertilizer, start agitation, add the proper amount of Pennant Liquid, then add the rest of the water or fluid fertilizer. Agitate continuously during mixing and application to maintain a uniform emulsion.

Tank Mixtures: Fill the spray tank $\frac{1}{4}$ full with water or fluid fertilizer, and start agitation, then add the tank mix partner, allowing it to become dispersed. Then add Pennant Liquid, and finally the rest of the water or fluid fertilizer. Agitate continuously during mixing and application to maintain uniformity. Check compatibility of mixture with fluid fertilizer as described below before mixing in spray tank.

Note: Before using Pennant Liquid in a tank mix with fluid fertilizer or registered pesticides, determine the tolerance of the plant species by applying the combination to a limited area during a period of active growth.

Compatibility Test: Since liquid fertilizers can vary, even within the same analysis, always **check compatibility with herbicide(s) each time before use.** Be especially careful when using **complete** suspension or fluid fertilizers as serious compatibility problems are more likely to occur. Commercial application equipment may improve compatibility in some instances. The following test assumes a spray volume of 25 gals./A. For other spray volumes, make appropriate changes in the ingredients. Check compatibility using this procedure.

8/30

1. Add 1 pt. of fertilizer to each of 2 one-qt. jars with tight lids.
2. To **one** of the jars, add 1/4 tsp. or 1.1 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (1/4 tsp. is equivalent to 2 pts. per 100 gals. spray). Shake or stir gently to mix.
3. To **both** jars, add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

Dry herbicides: For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

Liquid herbicides: For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.

After adding all ingredients, put lids on and tighten, and invert each jar ten times to mix. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates, but can be readily remixed, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) slurry the dry herbicide(s) in water before addition, or (b) add 1/2 of the compatibility agent to the fertilizer and the other 1/2 to the emulsifiable concentrate or flowable herbicide before the addition to the mixture. If incompatibility is still observed, do not use the mixture.

4. After conducting the compatibility test, any pesticide wastes should be disposed of according to the instructions given in the **Storage and Disposal** section at the end of this label.

Ground Application: Apply Pennant Liquid alone or in tank mixtures by ground equipment in a minimum of 10 gals. of spray mixture per acre unless otherwise specified.

Use sprayers that provide accurate and uniform application. For Pennant Liquid tank mixtures with wettable powder or dry flowable formulations, screens and strainers should be no finer than 50-mesh. Rinse sprayer thoroughly with clean water immediately after use.

Calculate the amount of herbicide needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Aerial Application (Sod Farms Only): Apply Pennant Liquid in water alone or in tank mixtures with AAtrex®, Princep® or other herbicides registered for use on sod farms in a minimum total volume of 2 gals./A by aircraft. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft., using low drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply Pennant Liquid or Pennant Liquid mixtures at a minimum upwind distance of 400 ft. from sensitive plants.

Aerial Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the **Aerial Drift Reduction Advisory Information** section below.

Aerial Drift Reduction Advisory Information

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly,

10/30

or under unfavorable environmental conditions (see **Wind, Temperature and Humidity, and Temperature Inversions**).

Controlling Droplet Size

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length

For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continues into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

Overhead or Microjet Irrigation Application: Pennant Liquid alone or in tank mixture with other herbicides which are registered for overhead or microjet application may be applied in irrigation water at rates recommended on this label. Apply this product only through an overhead or microjet irrigation system. Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension specialists, equipment manufacturers, or other experts. Do not connect an irrigation system

12/30

(including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Operation Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 1 part of water to 1 part herbicide(s) and inject this mixture into the overhead or microjet system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Meter into irrigation water during entire period of water application.
10. Apply in 1/2-1 inch of water. Use the lower water volume (1/2 inch) on

coarser-textured soils and the higher volume (1 inch) on finer-textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

Precaution for overhead or microjet applications: Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, injury to desirable plants may result.

Dry Bulk Granular Fertilizers

Many dry bulk granular fertilizers may be impregnated or coated with Pennant Liquid alone or with selected Pennant Liquid tank mixtures which are registered and not prohibited from use on dry bulk granular fertilizers.

When applying Pennant Liquid or Pennant Liquid mixtures with dry bulk granular fertilizers, follow all directions for use and precautions on the respective product labels regarding target crops, rates per acre, soil texture, application methods (including timing of application), and rotational crops.

All individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling the herbicide/fertilizer mixture.

Prepare the granular herbicide/fertilizer mixtures by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray Pennant Liquid or Pennant Liquid tank mixtures onto the fertilizer must be placed to provide uniform spray coverage.

If the herbicide/fertilizer mixture is too wet, use a highly absorptive material, such as Agsorb® granules, Microcel E (Johns-Manville Products Corporation), diatomaceous earth or finely powdered clay, to obtain a dry free-flowing mixture. Add the absorptive material separately and uniformly to the herbicide/fertilizer mixture and blend to form a suitable free-flowing mixture. Generally, less than 2% by weight of absorptive material will be needed.

Calculate amounts of Pennant Liquid and other herbicides needed by the following formula:

$$\frac{2,000 \text{ lbs. or fertilizer per acre}}{\text{pts./A of liquid or flowable product}} \times \text{pts. of liquid or flowable product per ton of fertilizer}$$

$$\frac{2,000 \text{ lbs. of fertilizer per acre}}{\text{lbs./A of dry product}} \times \text{lbs. of dry product per ton of fertilizer}$$

Precautions: To avoid potential for explosion, (1) Do not impregnate Pennant Liquid or Pennant Liquid mixtures on ammonium nitrate, potassium nitrate or sodium nitrate either alone or in blends with other fertilizers. (2) Do not combine mixtures of Pennant Liquid plus any other herbicide with single superphosphate (0-20-0) or treble superphosphate (0-46-0). (3) Do not use Pennant Liquid or Pennant Liquid mixtures on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated.

Application

Apply 100-800 lbs. of the herbicide/fertilizer mixture per acre. For best results, apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury. Non-uniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve weed control. On fine- or medium-textured soils in areas where soil incorporation is not planned, i.e., reduced tillage situations or in some conventional tillage situations, make applications approximately 30 days before planting to allow moisture to move the herbicide/fertilizer mixture into the soil. On coarse-textured soils, make applications approximately 14 days prior to planting.

Precaution: To avoid potential injury of ornamental plants, do not use the herbicide/fertilizer mixture where planting beds are to be formed.

Nurseries and Landscape Plantings

Apply Pennant Liquid at rates indicated below to control many annual grasses, certain broadleaf weeds and yellow nutsedge (see the following list). Calibrate applicator before application according to the manufacturer's directions.

Weeds Controlled

- | | | |
|------------------|-----------------------|------------------------|
| annual bluegrass | green foxtail | yellow foxtail |
| barnyardgrass | prairie cupgrass | <u>yellow nutsedge</u> |
| (watergrass) | red rice | black nightshade |
| crabgrass | signalgrass | carpetweed |
| crowfootgrass | (Brachiaria) | Florida pusley |
| fall panicum | southwestern cupgrass | galinsoga |
| foxtail millet | witchgrass | pigweed |
| giant foxtail | | |
| goosegrass | | |

15/30

Weeds Partially Controlled*: common purslane, groundsel, hairy nightshade, sandbur, seedling johnsongrass, shattercane and volunteer sorghum.

*Control of these weeds can be erratic due partially to variable weather conditions.

Application

Apply Pennant Liquid in sufficient carrier to obtain thorough coverage. For liquid carriers, use a minimum of 10 gals./A. Apply before grass, broadleaf weeds, or yellow nutsedge emerge or after existing weeds or nutsedge plants have been removed. A second application may be needed to provide control for an extended period.

Suggested Rates of Pennant Liquid

Soil Texture	Pts./A*	ml/1,000 sq. ft.
Coarse	2-3	22-33
Medium	2-3	22-33
Fine	3-4	33-43

*Use higher rates for a given soil texture on high organic matter soils and where yellow nutsedge and/or a heavy infestation of weeds is expected. Use the lower rates on soils with low organic matter content, and where light infestations of weeds are expected. In peat and muck soils and soils highly enriched with organic matter (i.e., sawdust) and/or synthetic mixes, the activity of Pennant Liquid may be reduced.

If banded applications are used, refer to the **General Information** section of this label to calculate the amount of Pennant Liquid needed.

Precautions: (1) To avoid plant injury, do not apply Pennant Liquid to seedbeds, cutting beds, or unrooted cuttings before transplanting, or to plants until the soil has firmly settled around roots. (2) When Pennant Liquid is applied broadcast over-the-top of plant foliage, follow with sufficient overhead irrigation to wash Pennant Liquid from the foliage to reduce the chance of injury.

Pennant Liquid has been found to be safe on the following plants.

Container-Grown Plants

Scientific Name	Common Name/Variety
<i>Abelia grandiflora</i>	Glossy Abelia
<i>Acer rubrum</i>	Red Maple
<i>Ajuga reptans</i>	Ajuga
<i>Aucuba japonica variegata</i>	Variegated Aucuba
<i>Betula nigra</i>	River Birch
<i>Buxus</i> spp.	Boxwood
<i>Carex</i> spp.	Carex
<i>Cornus</i> spp.	Dogwood
<i>Cotoneaster</i> spp.	Cotoneaster
<i>Euonymus fortunei</i>	Euonymus
<i>Euonymus kiautschovicus</i>	Manhattan Euonymus
<i>Forsythia</i> spp.	Forsythia
<i>Gardenia jasminoides</i>	Gardenia
<i>Hedera helix</i>	English Ivy
<i>Hosta lancifolia</i>	Variegated Hosta
<i>Ilex attenuata</i>	Savannah Holly
<i>Ilex cornuta</i>	Dwarf Burford Holly
<i>Ilex crenata</i>	Japanese Holly
<i>Juniperus chinensis</i>	Chinese Juniper
<i>Juniperus horizontalis</i>	Juniper
<i>Juniperus sabina</i>	Hick's Juniper/Foemina
<i>Juniperus virginiana</i>	Eastern Red Cedar
<i>Kalmia</i> spp.	Mountain Laurel
<i>Leucothoe fontanesiana</i>	Leucothoe
<i>Ligustrum japonicum</i>	Ligustrum or Privet
<i>Liriope muscara</i>	Liriope
<i>Liriope spicata</i>	Green Liriope
<i>Myrica cerifera</i>	Wax Myrtle
<i>Ophiopogon japonicus</i>	Mondo Grass
<i>Pachysandra terminalis</i>	Japanese Pachysandra
<i>Pinus strobus</i>	White Pine
<i>Pinus thunbergii</i>	Japanese Black Pine
<i>Pittosporum tobira</i>	Pittosporum
<i>Quercus phellos</i>	Willow Oak
<i>Rhododendron catawbiense</i>	Catawba Azalea
<i>Rhododendron indica</i>	Formosa/Indica Azalea
<i>Rhododendron obtusum</i>	Kurume Azalea
<i>Taxus cuspidata</i>	Yew
<i>Thuja occidentalis</i>	Globe Arborvitae
<i>Tsuga canadensis</i>	Hemlock
<i>Viburnum</i> spp.	Viburnum
<i>Yucca</i> spp.	Yucca

Field- and Liner*-Grown Plants and Plants in Landscape Plantings

*Plants transplanted normally in rows in a nursery or similar area for further growth before transplanting to final growing location (place of establishment).

Scientific Name	Common Name/Variety
<i>Abelia</i> spp.	Glossy Abelia
<i>Abies</i> spp.	Fir
<i>Acer</i> spp.	Maple
<i>Achillea</i> spp.	Yarrow
<i>Agapanthus africanus</i>	African Lily
<i>Ageratum</i> spp.	Blue Ageratum
<i>Ajuga reptans</i>	Ajuga
<i>Allium</i> spp.	Allium
<i>Allyssum</i> spp.	Allyssum
<i>Antirrhinum majus</i>	Snapdragon
<i>Aquilegia</i> spp.	Columbine
<i>Artemesia stoleriana</i>	Dusty Miller
<i>Asclepias</i> spp.	Milkweed
<i>Aster</i> spp.	Aster
<i>Aucuba</i> spp.	Aucuba
<i>Berberis</i> spp.	Barberry
<i>Betula</i> spp.	Birch
<i>Bougainvillea</i> spp.	Bougainvillea
<i>Buxus</i> spp.	Boxwood
<i>Camellia</i> spp.	Camellia
<i>Campanula carpatica</i>	Bellflower
<i>Canna indica</i>	Canna Lily
<i>Carex</i> spp.	Carex
<i>Chrysanthemum</i> spp.	Chrysanthemum, Daisy
** <i>Citrus</i> spp.	Citrus
<i>Coreopsis</i> spp.	Coreopsis
<i>Cornus</i> spp.	Dogwood
<i>Cortaderia selloana</i>	Pampas Grass
<i>Cotoneaster</i> spp.	Cotoneaster
<i>Crocus</i> spp.	Crocus
<i>Cryophytum crystallium</i>	Ice Plant
<i>Cytisus racemosus</i>	Sweet Broom
<i>Daucus carota</i>	Queen Anne's Lace
<i>Delphinium</i> spp.	Delphinium
<i>Dianthus barbatus</i>	Sweet William
<i>Eleagnus</i> spp.	Eleagnus
<i>Endymion</i> spp.	Endymion

<i>Escallonia fradesii</i>	Escallonia
<i>Euonymus</i> spp.	Euonymus
<i>Ficus</i> spp.	Fig
<i>Forsythia</i> spp.	Forsythia
<i>Fraxinus</i> spp.	Ash
<i>Gaillardia</i> spp.	Gaillardia
<i>Gardenia jasminoides</i>	Gardenia
<i>Gazania splendoens</i>	Gazania Gold Rush
<i>Gelsemium sempervirens</i>	Carolina Jessamine
<i>Geranium</i> spp.	Geranium
<i>Geum</i> spp.	Geum
<i>Gingko biloba</i>	Gingko
<i>Gladiolus x hortulanus</i>	Gladiolus
<i>Gleditsia triacanthos</i>	Honey Locust
<i>Hedera</i> spp.	English Ivy
<i>Hemerocallis</i> spp.	Daylily
<i>Hibiscus</i> spp.	Hibiscus
<i>Hosta lancifolia</i>	Hosta
<i>Hyacinthus</i> spp.	Hyacinth
<i>Hydrangea</i> spp.	Hydrangea
<i>Hypericum</i> spp.	St. John's Wort
<i>Ilex</i> spp.	Holly
<i>Illicium</i> spp.	Spicebush
<i>Impatiens</i> spp.	Impatiens
<i>Iris</i> spp.	Iris
<i>Jasmine</i> spp.	Jasmine
<i>Juniperus</i> spp.	Juniper
<i>Kalmia</i> spp.	Kalmia
<i>Lagerstroemia</i> spp.	Crepe Myrtle
<i>Leucothoe</i> spp.	Leucothoe
<i>Ligustrum</i> spp.	Privet
<i>Lilium</i> spp.	Lily
<i>Liquidambar</i> spp.	Sweetgum
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Liriope</i> spp.	Liriope
<i>Lonicera</i> spp.	Honeysuckle
<i>Lupinus</i> spp.	Lupines
<i>Lythrum</i> spp.	Loosestrife
<i>Magnolia</i> spp.	Magnolia
** <i>Malus</i> spp.	Crabapple, Apple
<i>Mesembryanthemum crystallinum</i>	Ice Plant
<i>Morea</i> spp.	Fortnight Lily
<i>Muscari armeniacum</i>	Muscari
<i>Myrica</i> spp.	Wax Myrtle
<i>Nandina domestica</i>	Bamboo

<i>Narcissus</i> spp.	Narcissus
<i>Nerium oleander</i>	Oleander
<i>Oenothera</i> spp.	Primrose
<i>Ophiopogon japonicus</i>	Mondo Grass
<i>Ornithogalum umbellatum</i>	Star of Bethlehem
<i>Osmanthus</i> spp.	Osmanthus
<i>Pachysandra</i> spp.	Pachysandra
<i>Pelargonium x hortorum</i>	Geranium
<i>Petunia</i> spp.	Petunia
<i>Phlox</i> spp.	Phlox
<i>Photinia</i> spp.	Photinia
<i>Physocarpus</i> spp.	Ninebark
<i>Physostegia</i> spp.	Physostegia
<i>Picea</i> spp.	Spruce
<i>Pieris japonica</i>	Japanese Andromeda
<i>Pinus</i> spp.	Pine
<i>Pittosporum</i> spp.	Pittosporum
<i>Podocarpus</i> spp.	Podocarpus
<i>Populus</i> spp.	Poplar
<i>Potentilla</i> spp.	Potentilla (Cinquefoil)
** <i>Prunus</i> spp.	Cherry
<i>Pseudotsuga menziesii</i>	Douglas Fir
<i>Pyracantha</i> spp.	Firethorn
** <i>Pyrus</i> spp.	Pear
<i>Quercus</i> spp.	Oak
<i>Raphiolepis</i> spp.	Indian Hawthorne
<i>Rhododendron</i> spp.	Rhododendron/Azalea
<i>Robinia</i> spp.	Locust
<i>Rosa</i> spp.	Rose
<i>Rumohra adiantiformis</i>	Leatherleaf Fern
<i>Salix</i> spp.	Willow
<i>Scilla</i> spp.	Scilla
<i>Sedum</i> spp.	Stone Crop
<i>Senecio doronicum</i>	Leopard's-bane
<i>Spiraea</i> spp.	Spiraea
<i>Stachys</i> spp.	Stachys
<i>Statice sinnata</i>	Annual Statice
<i>Symphoricarpos</i> spp.	Snowberry
<i>Syringa</i> spp.	Lilac
<i>Tagetes</i> spp.	Marigold
<i>Taxodium distichum</i>	Bald Cypress
<i>Taxus</i> spp.	Yew
<i>Ternstroemia gymanathera</i>	Cleyera
<i>Thuja</i> spp.	Arborvitae
<i>Tsuga</i> spp.	Hemlock
<i>Tulipa</i> spp.	Tulip
<i>Veronica</i> spp.	Veronica

20/30

<i>Viburnum</i> spp.	Viburnum
<i>Vinca</i> spp.	Periwinkle
<i>Viola x Wittrockiana</i>	Pansy
<i>Washingtonia robusta</i>	Mexican Fan Palm
<i>Weigela</i> spp.	Weigela
<i>Wisteria senensis</i>	Wisteria
<i>Yucca</i> spp.	Yucca
<i>Zinnia</i> spp.	Zinnia

** Do not apply to trees or plants that will bear harvestable fruit within 12 months, or illegal residues may result.

Pennant Liquid may be applied in tank mixtures with Goal®, Princep, Ronstar®, Roundup®, or other compatible herbicides registered for use on ornamentals. Refer to the respective product labels for weeds controlled and for plants on which they are registered for use. When applying Pennant Liquid in tank mixtures, observe the more restrictive directions for use, precautions, and limitations on this label or the respective tank mix product label.

Turfgrass

Warm Season Grasses (Bermudagrass, Centipedegrass, St. Augustinegrass, Bahiagrass and Zoysiagrass)

Do not use Pennant Liquid on turfgrasses in New York State.

Apply Pennant Liquid **before weeds emerge**. Since soil moisture is necessary to activate Pennant Liquid, irrigate with 1/2 inch of water if rain-fall does not occur within 7 days after treatment. (See **Precautions** below).

Weeds Controlled:

Scientific Name	Common Name	Rate of* Pennant
<i>Cyperus compressus</i>	Annual sedge	4 pts./A
<i>Cypereus esculentus</i>	Yellow nutsedge	4 pts./A
<i>Digitaria ischaemum</i>	Smooth crabgrass	4 pts./A
<i>Digitaria sanguinalis</i>	Large crabgrass	4 pts./A
<i>Leptochloa fascicularis</i>	Bearded sprangletop	2-4 pts./A
<i>Leptochloa uninervia</i>	Mexican sprangletop	2-4 pts./A
<i>Poa annua</i>	Annual bluegrass	2-4 pts./A

*2 pts./A = 22 ml/1,000 sq. ft.

4 pts./A = 43 ml/1,000 sq. ft.

21/28
30

Note: To minimize potential turf injury, do not apply more than once per year.

Commercial St. Augustinegrass Sod Production

Apply Pennant Liquid **before weeds emerge**. Since soil moisture is necessary to activate Pennant Liquid, irrigate with 1/2 inch of water if rainfall does not occur within 7 days after treatment (See **Precautions** below).

Weeds Controlled:

Scientific Name	Common Name	Rate of* Pennant
- <i>Cyperus compressus</i>	Annual sedge	4 pts./A
<i>Cyperus esculentus</i>	Yellow nutsedge	4 pts./A
<i>Digitaria ischaemum</i>	Smooth crabgrass	4 pts./A
<i>Digitaria sanguinalis</i>	Large crabgrass	4 pts./A
<i>Leptochloa fascicularis</i>	Bearded sprangletop	2-4 pts./A
<i>Leptochloa uninervia</i>	Mexican sprangletop	2-4 pts./A
<i>Poa annua</i>	Annual bluegrass	2-4 pts./A

*2 pts./A = 22 ml/1,000 sq. ft.
4 pts./A = 43 ml/1,000 sq. ft.

Notes: (1) Do not apply more than once every 6 weeks. (2) Do not apply more than a total of 8 pts./A per year.

Precautions for all uses on turf: Temporary slowing of growth and yellowing may occur following application. To avoid turf injury, (1) use only on turfgrass not under stress from infestations of insects, nematodes, or diseases; (2) do not use on golf greens, tees, or aprons; (3) do not apply over the rooting area of trees or ornamentals not listed on this label; (4) do not seed or overseed with desirable turfgrass 4 months before or 6 months after treatment and (5) do not apply this product to newly seeded grasses until they have overwintered and have a well-developed rhizome system. (6) Before using Pennant Liquid in the tank mix with fluid fertilizer or other registered pesticides, determine the tolerance of the turf species by applying the combination to a limited area during a period of active growth. (7) In turfgrass areas which have heavy thatch, the weed control of Pennant Liquid may be reduced.

Note: To avoid possible illegal residues, do not graze or feed turf clippings to animals.

22/28/30

Storage and Disposal

Pesticide Disposal

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office.

Container Disposal

Do not reuse empty container. Triple rinse (or equivalent), puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. Keep out of smoke from burning containers.

This product may be stored at temperatures down to 30 degrees below 0°F.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

This product may cause skin sensitization reactions in some people. Causes skin and eye irritation. Do not get in eyes, on skin, or on clothing. Harmful if inhaled. Avoid breathing spray mist. Harmful if swallowed or absorbed through the skin. Avoid contamination of food.

Statement of Practical Treatment

If swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

Note to Physician: If swallowed, there is no specific antidote. Induce emesis and lavage stomach. Treat symptomatically! The use of an

23/1/26
30

aqueous slurry of activated charcoal (such as Norit A) and a saline cathartic should be considered.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

If inhaled: Remove victim to fresh air. Get medical attention.

If in eyes: Flush eyes with plenty of water. Call a physician if irritation persists.

Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category H on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls Statements

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. When using the closed system, the mixers' and loaders' PPE requirements may be reduced or modified as specified in the WPS.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

24/28

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

Ground Water Advisory

This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory

Metolachlor can contaminate surface water through ground spray drift. Under some conditions, metolachlor may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas within-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

Mixing/Loading Instructions

Care must be taken when using this product to prevent back siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check-valves or antisiphoning devices must be used on all mixing and/or irrigation equipment.

25/28

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be mixed/loaded or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 ft. of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading sites.

AAtrex®, Pennant® and Princep® trademarks of Ciba-Geigy Corporation

Agsorb® trademark of Oil-Dri Corporation

Compex® trademark of KALO Agricultural Chemicals, Inc.

Goal® trademark of Rohm and Haas Company for oxyfluorfen

Ronstar® trademark of Rhône-Poulenc Ag Company

Roundup® trademark of Monsanto Co.

Unite® trademark of HACO, Inc.

©1996 Ciba-Geigy Corporation

Ciba Crop Protection
 Turf and Ornamental Products
 Ciba-Geigy Corporation
 Greensboro, NC 27419

- CGA - 1 gal.
- CGA - 1 qt.
- CGA - 4 fl. oz.

26/28

- Revised 6/26/90
Turf Uses
- Revised 2/15/91
zoysiagrass - add weed
species, containerized
plants
- Revised 10/3/91
poa annua, Env. Hazards
- Revised 3/20/92
All turf
- Revised 8/4/93 - WPS
- Revised 7/9/94 - Van Diest
Est. # -
- Revised drainback jug
January, 1996
RED labeling

[QUARK/PENNANT/PENNANT-LIQ-A] - CCG - 8/6/96

27/30

(CONTAINER LABEL)

Pennant®

LIQUID HERBICIDE

For weed control in nurseries, turf, and landscape plantings

Active Ingredient:

Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)- N-(2-methoxy-1-methylethyl) acetamide	86.4%
Inert Ingredients:	13.6%
Total:	100.0%

Pennant Liquid contains 8 lbs. active ingredient per gallon.

See directions for use in attached booklet.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-691

EPA Est. 42761-MS-1^R
EPA Est. 5905-GA-01^H
EPA Est. 11773-IA-01^W

Superscript is first letter of lot number on
jug (gallon)
bottle (quart and 4 fl. oz.)

One Gallon
U.S. Standard Measure

One Quart
U.S. Standard Measure

4 fl. oz.
U.S. Standard Measure

KEEP OUT OF REACH OF CHILDREN.

CAUTION

Precautionary Statements

Hazards to Humans and Domestic Animals

This product may cause skin sensitization reactions in some people. Causes skin and eye irritation. Do not get in eyes, on skin, or on clothing. Harmful if inhaled. Avoid breathing spray mist. Harmful if swallowed or absorbed through the skin. Avoid contamination of food.

Statement of Practical Treatment

If swallowed: Call a physician or Poison Control Center. Drink 1 or 2 -glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

Note to Physician: If swallowed, there is no specific antidote. Induce emesis and lavage stomach. Treat symptomatically! The use of an aqueous slurry of activated charcoal (such as Norit A) and a saline cathartic should be considered.

If in eyes: Flush eyes with plenty of water. Call a physician if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

If inhaled: Remove victim to fresh air. Get medical attention.

If in eyes: Flush eyes with plenty of water. Call a physician if irritation persists.

Environmental Hazards

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

Ground Water Advisory

This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory

Metolachlor can contaminate surface water through ground spray drift. Under some conditions, metolachlor may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas within-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

Mixing/Loading Instructions

- Care must be taken when using this product to prevent back siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check-valves or antisiphoning devices must be used on all mixing and/or irrigation equipment.

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be mixed/loaded or used within 50 ft. of all wells, including abandoned wells, drainage, and sink holes*.

*For exceptions to this restriction, see the **Environmental Hazards** section of the **Precautionary Statements** in attached booklet.

Aerial Drift Management Requirements

Do not apply this product by air unless the supplemental labeling on **Aerial Drift Management** in attached booklet is followed.

Chemigation

Refer to supplemental labeling in attached booklet for use directions for chemigation. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed.

Container Disposal

Do not reuse empty container. Triple rinse (or equivalent), puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. Keep out of smoke from burning containers.

This product may be stored at temperatures down to 30 degrees below 0°F.

30/30

Pennant® trademark of Ciba-Geigy Corporation

©1996 Ciba-Geigy Corporation

Ciba Crop Protection
Turf and Ornamental Products
Ciba-Geigy Corporation
Greensboro, North Carolina 27419

CGA - 1 gal.
CGA - 1 qt.
CGA - 4 fl. oz.

[QUARK/PENNANT/PENNANT-LIQ-A] - ccg - 8/6/96