

Propose revision of registered label Date of Pre-Reg. Draft: 10/26/83
in accordance with: (1) CDEA Supersedes Pre-Reg. Draft Dated:
Requirements: (2) FR Notice 43-3. 9-8-83

This enclosure is the complete label text

PLANT GROWTH REGULATOR

ACCEPTED
10/27/83

Reduce Frequency of Mowing and
Mowing on Certain Grasses and Dicots

FORM

ACTIVE INGREDIENT:

READ THE LABEL BEFORE USING

Diethanolamine salt of meflidide*
N-[2,4-dimethyl-5-[[[trifluoromethyl]-
sulfonyl]amino]phenyl]acetamide).....28%*

EPA Reg. No. 7182-7-AA

INERT INGREDIENTS:..... 72%
100%

EPA Est. 87182-1L-81

NET CONTENTS: 1 Gallon

*U.S. Patent Nos. 3,639,474; 3,894,072; 4,013,444

**Equivalent to 2.0 lbs. (21% by weight) of
N-[2,4-dimethyl-5-[[[trifluoromethyl]-
sulfonyl]amino]phenyl]acetamide per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

HUMAN AND DOMESTIC ANIMALS:

Harmful if swallowed or absorbed through the skin.
Avoid breathing dust.
Avoid contact with hair, eyes, or clothing. Wash profusely with water
including rubber gloves when handling.
First Aid - Practical Treatments: If swallowed: Drink 1 or 2 glasses of
water and induce vomiting by touching back of throat with finger. Get
medical attention. If in eyes: flush with plenty of water. Get medical
attention if irritation persists.
If inhaled: Remove to fresh air. If necessary, use water with mild
soap and water.

ENVIRONMENTAL:

Do not apply directly to lakes, rivers, streams, or
Do not apply to water bodies.
Do not allow spray to drift onto water bodies.

HAZARDOUS TO AQUATIC LIFE:

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL:

Wastes resulting from the use of this product may be
disposed of at an approved waste disposal facility.

*Underlined letters in this label are
underlined in the original label.

BEST DOCUMENT AVAILABLE

CONTAINER DISPOSAL:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

DIRECTION FOR USE

GENERAL INFORMATION:

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

EMBARK 2-S Plant Growth Regulator (PGR) is recommended for regulating the growth of various species of turfgrasses, broadleaf vegetation, and ornamentals in public, commercial, and industrial areas.

SPRAY EQUIPMENT:

The following spray equipment is recommended for:

ORNAMENTALS AND GROUNDCOVERS: Use a power sprayer equipped with hand-held or vehicular-mounted equipment that will deliver sufficient spray to penetrate dense foliage and provide thorough coverage of all parts of shrubs or plants.

TURFGRASSES: Use conventional power spray equipment fitted with a spray boom, off-center nozzles, or handgun. Handpump sprayers are suitable for edging or spot treatments.

MIXING:

Pour the required amount of EMBARK PGR into the spray tank containing approximately 1/2 the required amount of water.

Fill the tank as required with water and spray as recommended.

Minimal agitation in the spray tank is necessary since EMBARK PGR is soluble in water.

CALIBRATION:

It is essential that spray equipment is properly adjusted and calibrated to assure proper dosage and uniform spray coverage. Follow the spray equipment manufacturers directions for cleaning, adjusting pressure and selecting appropriate nozzles.

RINSING:

Triple rinse the EMBARK PGR container with water and pour the rinse solution into the spray tank prior to spraying. Do not use spray equipment for other purposes until thoroughly cleaned. Flush spray equipment with plenty of water immediately after use to avoid contamination of later sprays.

BEST DOCUMENT AVAILABLE

TURFGRASSES

BEST DOCUMENT AVAILABLE

RECOMMENDED APPLICATIONS-TURFGRASSES

RECOMMENDED USE AREAS:

EMBARK PGR may be applied to specified turfgrasses in commercial, public and certain agricultural areas such as:

COMMERCIAL-INDUSTRIAL: Highway rights-of-way, utility rights-of-way, buildings, industrial parks, tank farms, airports.

PUBLIC: Schools, libraries, hospitals, cemeteries, golf courses, parks, roads, walkways.

AGRICULTURAL PREMISES: Around farm buildings, storage sheds, implement storage areas, and roadsides.

MOWING:

When mowing after application: for an evenly trimmed appearance grass may be mowed 3-7 days after EMBARK PGR is applied.

When mowing before application: grass may be mowed up to two days before applying EMBARK PGR. Clippings and other debris should be removed before spraying. If mowing removes most of the green leaf tissue, spraying should be delayed until sufficient new growth develops to assure product absorption into green leaves.

When mowing is not desired or practical: apply EMBARK PGR in the spring, after greenup, but before mowing is necessary, thus, avoiding mowing until growth regulation wears off.

Tank mixes with herbicides:

EMBARK PGR may be tank mixed with one of the following herbicides to control broadleaf weeds:

HERBICIDE	MAXIMUM RATE
TRIMEC Broadleaf Herbicide	4 pints/acre
2,4-D (low volatility, ester and salt formulations)	2 lbs. active ingredient/acre
MCPP in active salt formulations	2 lbs. active ingredient/acre

ROADSIDE AND LOW MAINTENANCE TURF:

Maximum benefits, including season long seedhead suppression of cool-season grasses, can be obtained by applying 1 1/2 to 2 parts/acre of EMBARK PGR with surfactant after uniform grass green-up until approximately 2 weeks before seedhead appearance. Use the 2 pint rate for maximum seedhead suppression during the last week of this period. If applied less than two weeks prior to seedhead appearance, EMBARK PGR applications will continue to give vegetative growth suppression for up to 8 weeks, however, mowing will be necessary to eliminate seedheads. For roadside and low maintenance turf in California, follow the recommended rates according to the California rate table.

Surfactants: The use of a surfactant (for example, Citowett, X-277 or WK-3 (except Calif.) is recommended to increase the extent and consistency of turfgrass regulation on roadside and low maintenance turf only. The surfactant rate is recommended at 0.15 to 0.25 W/V (1 to 2 parts 100 gallons finished spray mixture). Temporarily, slight reduction of turf vigor may occur due to the use of a surfactant.

LIMITATIONS:

Do not apply EMBARK PGR to golf greens. Do not apply to turf areas within 4 growing months after seeding and do not reseed within 3 days following application (except Calif. where reseeding may not occur within 2 weeks). Turf treated with EMBARK PGR may appear less dense and temporarily discolored when compared with untreated, actively-growing turf. However, with increasing time, turf may appear darker green than untreated areas. Optimum results may not be obtained if rainfall or overhead irrigation occurs within 8 hours following application. Do not allow animals to graze on treated areas.

APPLICATION RATE TABLE:

TURFGRASSES

Recommendations:

EMBARK PGR, applied to turfgrasses, reduces mowing requirements for up to 8 weeks following treatment by regulating growth and preventing seedhead formation. Apply EMBARK PGR uniformly to green, actively growing turf. For season-long seedhead suppression of cool-season grasses, apply no later than when the seedhead can be felt at the base of the stem (approximately 2 weeks prior to seedhead appearance). Do not apply to closely mowed areas, where most of the green growth has been cut. Remove excessive grass clippings and leaves prior to treatment. Avoid spray overlaps that will increase dosage above those recommended. EMBARK PGR may be applied more than once per season, however, wait at least 6 weeks between applications. In turfgrass renovation programs, areas treated with EMBARK PGR may be reseeded 3 days following application (except Calif. where reseeding may not occur within 2 weeks).

SPECIES:	RECOMMENDED RATE OF EMBARK 2-S PGR		REMARKS
	PER ACRE IN 15-150 GAL. WATER*	PER 1000 SQ. FT. IN WATER*	
Annual Bluegrass** (Poa annua) (seedhead suppressi-)	1/2 pint	1/5 fl. oz.	For seedhead suppression only apply after uniform green-up but before the first appearance of seedheads. Applications after first seedhead appearance will suppress seedhead formation.

APPLICATION RATE TABLE: (CONTINUED)

SPECIES:	RECOMMENDED RATE OF EMPARK 2-S PGR		REMARKS
	PER ACRE IN 15-150 GAL. WATER*	PER 1000 SQ. FT. IN WATER*	
Kentucky and Annual Bluegrass Tall, Red and Chewings Fescue Perennial Ryegrass Timothy Reed Canarygrass Quackgrass Rikuygrass Crested Wheatgrass** Orchardgrass** Smooth Bromegrass** Centipede grass	1 1/2 pints	3/5 fl. oz.	For these grasses recommended at the 1 1/2 pint rate a slightly longer period of growth regulation can be attained with a 2 pint/acre rate. If temporary dis- coloration of turf occurs and is ob- jectionable reduce the 1 1/2 pint rate to 1 pint/acre.
St. Augustine grass	1 pint	2/5 fl. oz.	
Common Bermuda grass	4 pints	1 1/2 fl. oz.	
CALIFORNIA USE ONLY			
Kentucky and Annual Bluegrass Tall, Red and Chewings Fescue Perennial Ryegrass Timothy Reed Canarygrass Quackgrass Centipede grass Rikuygrass	1 1/2 pints	3/5 fl. oz.	For grasses re- commended at the 1 1/2 pint rate, reduce the rate to 1 pint/acre if temporary dis- coloration of turf occurs and is objectionable. In turfgrass re- novation programs, areas treated with EMPARK 2-S may be reseeded 2 weeks following applica- tion.
St. Augustine grass	1 pint	2/5 fl. oz.	
Common Bermuda grass	4 pints	1 1/2 fl. oz.	
NATIVE GRASS AND RECADEAF USE ONLY			
Wild Barley, Red Brome, Field Brome, Wild Brome Cocksfoot Clover, Field Poa Black Wild	2 pints	4/5 fl. oz.	For native grasses and Recadefaf use application, areas with high soil fertility may require 4 pints/acre.

*The amount of water used for application should be sufficient to thoroughly wet the turf surface.
**The amount of water used for application should be sufficient to thoroughly wet the turf surface.

1965 EMPARK 2-S PGR

ORNAMENTALS

RECOMMENDED APPLICATIONS - ORNAMENTALS

RECOMMENDED USE AREAS:

EMBARK PGR may be applied to specified ornamentals and groundcover in commercial and public areas such as:

COMMERCIAL-INDUSTRIAL: Highway rights-of-way, utility rights-of-way, buildings, industrial parks, tank farms, airports.

PUBLIC: Schools, libraries, hospitals, cemeteries, golf courses, parks, roads, walkways.

LIMITATIONS:

Avoid spray drift on non-target foliage. Avoid drift on food crops. Do not wash foliage for at least 4 hours after application. If rain occurs within 8 hours, dilution of spray may occur. Do not apply to plants that are stressed, diseased, or otherwise unhealthy. Do not apply to plants grown in containers. Before using EMBARK 2-S on ornamentals, thoroughly clean spray tank to remove any broadleaf herbicide that may be present.

APPLICATION RATE TABLE:

ORNAMENTALS

Recommendations:

EMBARK PGR applied as a full coverage spray to specified ornamental shrubs, hedges, trees and groundcover reduces trimming and pruning for up to 12 weeks by regulating growth.

SPECIES:	RECOMMENDED RATE OF EMBARK 2-S PGR		REMARKS
	PER 100 GALS. WATER	PER GAL. WATER	
Ligustrum, Japanese Pyracantha English Ivy Burford Holly Japanese Holly (except Calif.)	4 pints	2/3 fl.oz.	For growth regulation, apply EMBARK PGR as a full coverage spray to runoff and foliage penetration. Applications should be made to healthy, actively growing plants 7-14 days after pruning or trimming. Once the plant resumes active growth, pruning and repeat applications may be made.
Ornamentals California Use Only			
Groundcovers: African Daisy Capeweed Iceplant Ivy, English and Algerian Shrubs and Trees: Acacia Bottlebrush Brazilian Pepper Tree Carob Ficus etc.	4 pints	2/3 fl.oz.	

APPLICATION RATE TABLE: (CONTINUED)

SPECIES:	RECOMMENDED RATE OF EMPARK 2-S PGR		REMARKS
	PER 100 GALS. WATER	PER GAL. WATER	
Burford Holly Melaleuca Oleander Photinia Pittosporum Podocarpus Privet (Ligustrum sp.) Pyracantha Raphiolepis Viburnum Xylosma			
Ornamental Olive Trees	1 pint	1/6 fl.oz.	For flower inhibition of olive trees, apply EMPARK PGR to foliage as a full coverage spray to run-off at pre-bloom (tight bud stage) through the 50 bloom stage. Trees 20 to 30 ft. in height will require 10 to 15 gallons of finished spray solution per tree.

NOTICE - LIMITED WARRANTY:

The Directions for Use for 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. Permanent injury, ineffectiveness or other unintended consequences may result because of such factors as adverse weather conditions, presence of fertilizers or other pesticides, or use inconsistent with label directions, all of which are beyond the control of IM or the Seller. All such risks shall be assumed by the Buyer.

IM 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. IM disclaims any other expressed or implied warranty of Fitness or Satisfiability or any other expressed or implied warranty. In no case shall IM or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.

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3M 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 3M.

EMBARK is a registered trademark of 3M.
Citovett is a registered trademark of BASF, AG.
Surfactant WR is a product of E.I. DuPont de Nemours and Company (Inc.).
X-77 is a product of Chevron Chemical Company.
TRIMEC is a registered trademark of P.B.I. - Gordon Corporation.

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