

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Dr. Janet Ollinger
Rohm and Haas Company
Independence Mall West
Philadelphia, PA 19105

MAY 03 1993

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Dear Dr. Ollinger:

Subject: Amended Labeling
Dithane F-45 Flowable Agricultural Fungicide
EPA Reg. No. 707-156
Your Submissions Dated November 4, 1992 and
December 9, 1992

The amendments referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, are acceptable with the following comments:

Note that this acceptance of your label does not relieve you of your obligation to comply with the Worker Protection Standard (WPS). If any of your products are covered by the WPS, you are required to submit, and receive the Agency's approval by April 21, 1994, of a revised label reflecting the required label statements of 40 CFR 156, published in the FEDERAL REGISTER on August 21, 1992 (57 FR 38102). Further guidance will be issued. According to 40 CFR 156, subpart K, specifically §156.200(c)(3): "No product to which this subpart applies shall be distributed or sold without amended labeling by any registrant after April 21, 1994."

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

Sincerely yours,

Clarence O. Lewis, III
Acting Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

H7505C:J.Fairfax:707-156:4/16/93:5/3/93

CONCURRENCES

SYMBOL	H7505C H7505C					
SURNAME	J. Fairfax C. Lewis					
DATE	5/3/93					



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NOTICE: Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions. If the Conditions of Sale and Warranty are not acceptable, return the product unopened within thirty days of purchase to the place of purchase.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals
May cause irritation of nose, throat, eyes and skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. In case of contact immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists. **PROTECTIVE CLOTHING AND EQUIPMENT:** All agricultural workers/handlers (i.e., mixers, loaders, and applicators) applying EBOC's must wear coveralls over long-sleeved shirt and long pants; shoes, socks and chemical-resistant gloves. During mixing and loading, a chemical-resistant apron and goggles or a face shield must also be worn. Refer to Re-entry and Worker Protection Statements for additional Worker Safety rules.

STATEMENT OF PRACTICAL TREATMENT
IF SWALLOWED: Dilute by giving 2 glasses of water to drink and call a physician. Never give anything by mouth to an unconscious person.
IF INHALED: Move subject to fresh air.
IF IN EYES: Flush eyes with large amounts of water for at least 15 minutes. Consult a physician if irritation persists.
IF ON SKIN: Wash affected skin areas with soap and water.

ENVIRONMENTAL HAZARDS
This pesticide is toxic to fish. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. 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 washwaters or disposing of wastes.

CONDITIONS OF SALE AND WARRANTY
Rohm and Haas warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. **ROHM AND HAAS MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.** Handling, storage and use of the product by Buyer or User are beyond the control of Rohm and Haas and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. **IN NO CASE WILL ROHM AND HAAS OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.**

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAY 03 1993

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

(1 inch)

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707-156

54Y-2785 Rev. - Rohm and Haas - 2A - 10/22/92

ACTIVE INGREDIENTS

MANCOZEB
A coordination product of zinc ion and manganese ethylene bisdithiocarbamate 37%*

Manganese*** 7.4%

Zinc** 0.9%

Ethylene bisdithiocarbamate ion (E.H.A.S.) 28.7%

INERT INGREDIENTS 63%

Total 100%

*Equivalent to 4 lbs. active ingredient per gallon.
EPA Reg. No. 707-156
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DIRECTIONS FOR USE
It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

RE-ENTRY AND WORKER PROTECTION STATEMENTS

WORKER SAFETY RULES
Keep all unprotected persons, children, livestock and pets away from treated area or where there is danger of drift. Do not rub eyes or mouth with hands. See Statement of Practical Treatment.

PERSONAL PROTECTIVE EQUIPMENT — for Mixers, Loaders, Applicators and Early Re-entry Workers.
HANDLE THIS PRODUCT ONLY WHEN WEARING THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT: All agricultural workers/handlers (i.e., mixers, loaders, and applicators) applying EBOC's must wear coveralls over long-sleeved shirt and long pants; shoes, socks, and chemical-resistant gloves. During mixing and loading, a chemical-resistant apron and goggles or a face shield must also be worn. For agricultural workers, where completely enclosed cabs with positive pressure filtration or an enclosed cockpit for aerial application are used, a long-sleeved shirt and long pants may be worn in place of the protective clothing described above. Chemical-resistant gloves must be available in the cab or cockpit and worn open ending. The gloves must be kept in an enclosed container in the cab or cockpit to prevent contamination of the inside of the cab or cockpit. During aerial application, human flaggers are prohibited unless in totally enclosed vehicles.

IMPORTANT! Before removing gloves, wash them with soap and water. Always wash hands, face and arms with soap and water before eating, smoking or drinking. Always wash hands and arms with soap and water before using the toilet.

After work take off all clothes and shoes. Shower using soap and water. Wear only clean clothes. Do not use contaminated clothing. Wash protective clothing and protective equipment with soap and water after each use. Personal clothing worn during use must be laundered separately from household articles. Clothing and protective equipment heavily contaminated or drenched with FORE FLOWABLE Turf and Ornamental fungicide must be destroyed according to state and local regulations.

HEAVILY CONTAMINATED OR DRENCHED CLOTHING CANNOT BE ADEQUATELY DECONTAMINATED.
During aerial application, human flaggers are prohibited unless in totally enclosed vehicles.

RE-ENTRY STATEMENTS
Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information:

CAUTION
AREA TREATED WITH FORE FLOWABLE TURF AND ORNAMENTAL FUNGICIDE on 1/4" of application.

FOR ALL USES (i.e., Farms and Commercial Nurseries): Do not enter treated areas without protective clothing until sprays have dried.

FOR SODFARMS AND COMMERCIAL NURSERIES: Do not enter or allow entry into treated area until 24 hours after application unless wearing the personal protective equipment listed on this label.

GENERAL USE INFORMATION

FORE FLOWABLE Turf and Ornamental fungicide is a broad-spectrum protectant fungicide recommended for outdoor or greenhouse-grown crops. Optimum disease control is achieved when the fungicide is applied in a regularly scheduled preventative spray program. The addition of an agricultural surfactant will improve fungicide performance by providing a more uniform spray deposit, increased foliar redistribution, and improved fungicide retention during periods of wet weather.

USE RATE DETERMINATION

Carefully read, understand, and follow label use rates and restrictions.

Under low disease conditions, minimum label rates per application can be used while maximum label rates and the minimum interval may be used for severe or threatening disease conditions.

For proper application to turf, determine the square footage to be treated, divide footage by 1000 and multiply by the recommended fungicide use rate per 1000 sq. ft., and then determine the amount of water required to provide adequate coverage. When treating ornamentals, determine the recommended fungicide use rate and the spray gallonage required to provide a thorough coverage. Prepare only the amount of spray solution required to treat the desired area.

If only a portion of the container's contents are to be used, thoroughly shake the container prior to measuring. When small quantities of spray solution are being prepared for use in hand or power sprayers, the following conversion table should be followed (rates are based on dilute thorough coverage sprays):

Recommended Label Use Rates Per Acre or 100 Gals.*	Fluid Ounces FORE FLOWABLE Turf and Ornamental Fungicide Required for:			
	10 Gals.	5 Gals.	2 Gals.	1 Gal.
0.8 qts.	2.6	1.3	0.5	0.3
1.0 qt.	3.2	1.6	0.7	0.3
1.2 qts.	3.8	1.9	0.9	0.3
1.6 qts.	5.1	2.6	1.0	0.5
2.0 qts.	6.4	3.2	1.3	0.6
2.4 qts.	8.0	4.0	1.6	0.8
3.2 qts.	10.3	5.1	2.1	1.0
4.8 qts.	15.4	7.7	3.1	1.6

1 cup = 8 fluid ounces or 237 milliliters
1 fluid ounce = 2 tablespoons or 30 milliliters
1 tablespoon = 3 teaspoons or 15 milliliters
*Dilute thorough coverage sprays.

MIXING

Slowly place into spray tank as it is being filled or thoroughly premix before adding to the spray tank. Add other co-applied fungicides, insecticides, growth regulators, micronutrients, and spray adjuvants after FORE FLOWABLE Turf and Ornamental fungicide has been placed into suspension.

When preparing spray solutions for use in a hand sprayer, premix as a slurry in a small container, and then add to sprayer containing 1/3 to 1/2 the desired final water volume.

COMPATIBILITY

FORE FLOWABLE Turf and Ornamental fungicide is compatible with most commonly used agricultural fungicides, insecticides and growth regulators. When preparing tank mixes, user should consult spray compatibility charts or State Cooperative Extension Service Specialists prior to actual use.

APPLICATION

GROUND — Thorough coverage foliar sprays generally result in optimum disease control. To achieve good coverage use proper spray pressure, gallonage per acre, nozzles (generally hollow cone), disc (generally D-5 to D-7), nozzle spacing, and tractor speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration.

HAND SPRAYERS — Thoroughly spray plant foliage until runoff.

AERIAL — A uniform initial spray deposit generally results in optimum disease control. Each aircraft should be prechecked for droplet size, uniformity of spray pattern, swath width and spray volume. During aerial application, human flaggers are prohibited unless in totally enclosed vehicles.

Nozzle Selection — Hollow cone brass nozzles with a D-series orifice disc and core (whirlplate) are recommended. Nozzles should point straight down or slightly backward.

Swath width — For most crops, swaths just beyond the wingspan of 36 to 40 feet for light aircraft and up to 45 feet for heavier aircraft are suggested. Optimum swath for helicopters is usually 5 to 10 feet beyond normal boom length.

Spray volume — Aerial applications are to be made in a minimum of two (2) gallons of water per acre. On most crops 2 to 3 gallons of spray per acre are generally optimum. Some tall or dense foliage crops, requiring greater penetration to the lower leaf surfaces will require higher spray volumes. **DO NOT USE LESS THAN 5 GALLONS PER ACRE IN CALIFORNIA.**

Altitude — For most crops, the spray boom should be positioned 5 to 10 feet above the crop canopy.

Flagging — Swaths should be marked at the end of the field with permanent flags or by a flagman in a totally enclosed vehicle. Swaths should be measured accurately with a chain or other device except when rows can be accurately counted.

CHEMIGATION USE DIRECTIONS

Sprinkler Irrigation

FORE FLOWABLE Turf and Ornamental fungicide must be applied on a regular protectant fungicide schedule, not an irrigation schedule. If irrigation cycles are less frequent than recommended FORE FLOWABLE Turf and Ornamental fungicide application intervals, ground or aerial applications must supplement chemigation applications to achieve adequate disease control.

Apply FORE FLOWABLE Turf and Ornamental fungicide only through sprinkler irrigation systems including center-pivot, lateral move, end row, side (wheel) roll, traveler, solid set, or hand move irrigation systems. Do not apply product through any other type of irrigation system.

Lack of fungicidal effectiveness can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (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.

Before applying FORE FLOWABLE Turf and Ornamental fungicide through sprinkler irrigation equipment, the chemigation system must meet the following specifications:

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- Systems not connected to a public water supply must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located in the irrigation pipeline to prevent water source contamination from back flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 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.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when low water pressure decreases to the point where pesticide distribution is adversely affected.
- 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.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

Center-pivot, Lateral Move, End Tow, and Traveler Irrigation Equipment: (use only with electric or oil hydraulic drive systems which provide a uniform water distribution)

- Determine size of area to be treated.
- Determine the time required to apply no more than 1/4 inch water (6,750 gallons water per acre) over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run system at 80 to 95% of manufacturer's rated capacity.
- Using only water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of FORE FLOWABLE Turf and Ornamental fungicide required to treat area.
- Add the required amount of FORE FLOWABLE Turf and Ornamental fungicide and sufficient water to meet the injection time requirements of the solution tank.
- Maintain constant solution tank agitation during the injection period.
- Stop injection equipment after treatment is completed. Continue to operate the system until FORE FLOWABLE Turf and Ornamental fungicide solution has cleared the sprinkler head.

Solid-set, Side (whe l) Roll, and Hand Move Irrigation Equipment:

- Determine acreage covered by sprinkler.
- Fill injector solution tank with water and adjust flow rate to use contents over a 10 to 30 minute interval.
- Determine the amount of FORE FLOWABLE Turf and Ornamental fungicide required to treat area.

- Add the required amount of FORE FLOWABLE Turf and Ornamental fungicide into the same quantity of water used to calibrate the injection equipment.
- Maintain constant solution tank agitation during the injection period.
- Operate system at normal pressures recommended by the manufacturer of the injection equipment and used for the time interval established during calibration.
- Inject FORE FLOWABLE Turf and Ornamental fungicide at the end of the irrigation cycle or as a separate application to maximize foliar fungicide retention.
- Stop injection equipment after treatment is completed. Continue to operate the system until FORE FLOWABLE Turf and Ornamental fungicide solution has cleared the sprinkler head.

DISEASE SCOUTING

FORE FLOWABLE Turf and Ornamental fungicide is a broad-spectrum protectant fungicide. If not applied on a routine protectant spray schedule, turf and ornamental plants should be frequently observed for disease signs or symptoms. Fungicide application should be made at the recommended label use rate and spray schedule, when disease is first observed, reported in local area, or during environmental conditions favorable for disease development.

RESTRICTIONS

Users should carefully read, understand, and follow all use restrictions prior to using FORE FLOWABLE Turf and Ornamental fungicide. If this product is used on a crop, no other product containing a different EBDC's active ingredient may be used on the same crop during the same growing season.

TURF — For golf courses, sod farms, industrial or municipal turf areas and professional applications to residential lawns. Not for use by homeowners.

Start applications when grass greens-up in spring or when disease first appears, and repeat at 7 to 14 day intervals or until disease threat is past. When conditions are especially favorable for disease development, apply maximum fungicide use rate on a 7 day spray schedule. Apply in sufficient water to provide adequate coverage.

Crop	Diseases Controlled	Rate of FORE FLOWABLE Turf and Ornamental Fungicide Per Application	Remarks (Also Refer To Directions For Use)	Restrictions
		Fl. Oz./1000 Sq. Ft.		
Assorted Grasses	Helmethosporium melting-out Rust (leaf, stem, stripe)	6.4		Do not graze treated areas. Do not use on grasses intended for grazing, such as range or pasture grasses. Do not feed clippings to livestock. Do not use for grasses grown for seed.
	Copper spot Fusarium blight Red thread Slime mold	6.4 to 12.8		
	Algae	9.6		
	Rhizoctonia brown patch	6.4	Apply on a 7 day spray schedule.	
	Pythium blight	12.8	Apply at 5 day intervals, or more frequently, if conditions are especially favorable for disease development.	
	Fusarium snow mold	9.6 to 12.8	Apply at 2 to 6 week intervals during winter.	

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(1 inch)

ORNAMENTALS — Neither the manufacturer nor the seller has determined the effects of using FORE FLOWABLE Turf and Ornamental fungicide on ornamentals not specified on this label.

Prior to any large-scale applications on such plants, the user should determine the effects of FORE FLOWABLE Turf and Ornamental fungicide by testing a small section of the type of plants to be treated. User assumes all risk arising out of application to unlabeled plants. The Conditions of Sale and Warranty apply to all uses.

For outdoor or greenhouse use, apply the equivalent of 1.2 qts. FORE FLOWABLE Turf and Ornamental fungicide per 100 gals. dilute spray. The addition of LATRON 8-1956™ or similar nonionic spray adjuvant to spray solutions will improve performance.

Begin spraying when plants are well leafed out or at first sign of disease, in a full coverage spray at 7 to 10 day intervals throughout season or follow State Extension Service recommendations for disease control on the following ornamental plants:

Crop	Diseases Controlled	Remarks (Also Refer To Directions For Use)	Restrictions
African violet	Betrytis blight		Do not use for food or feed purposes. (Applies to all Ornamentals)
Anthurium	Anthracoese, spider rot		
Arbervitae	Cercospora blight		
Ash, mountain	Entomesporium leaf spot Gangaridus leaf blotch		
Ash, white	Anthracoese Cylindrosporium leaf spot		
Aster, perennial	Puccinia rusts		
Aucuba, japonica	Alternaria leaf spot Anthracoese		
Azalea	Cylindrocladium rot Petal blight Phytophthora twig and bud blight	Apply in a full coverage spray, 2 to 3 times a week, while flowers are opening. Direct spray into flowers and thoroughly spray ground under bushes.	
Begonia	Betrytis blight		
Buffaloberry	Cylindrosporium leaf spot		
Camelias	Petal blight	Refer to azalea.	
Carnation	Rust Septoria leaf spot		
Cedar, red (Juniper)	Cercospora blight Phomopsis blight		
Chrysanthemum	Ascochyta blight Betrytis petal spot Rust	Apply twice weekly during blooming period.	
Conifers	Lophodermium needle cast Pine gall rust Scirrhia brown spot	Begin application in spring or early summer before infection occurs. Repeat after heavy rains and at two week intervals as long as needed.	
Cardinal	Cercospora leaf spot		
Crabapple (Ornamental)	Cedar-apple rust Scab Sphaeropsis leaf spot		
Cypress, Arizona (Cupressus sp.)	Cercospora blight Menochaeta canker		
Dahlia	Betrytis blight		
Dieffenbachia	Leptosphera brown spot		
Dogwood, flowering	Anthracoese Elmiae leaf spot Septoria leaf spot	Apply when buds begin to open, when bracts have fallen, 4 weeks later and again in late summer after flower buds for next season have formed.	
Dracaena	Fusicoccum leaf spot		

ORNAMENTALS (cont'd)

Crop	Diseases Controlled	Remarks (Also Refer To Directions For Use)	Restrictions
Pachysandra	Volutella blight	Use a drenching spray of 1.6 qts. per 50 gallons of water per 5,000 sq. ft. of bed. Start application at first sign of disease and apply at least 5 applications at 10 to 14 day intervals.	Do not use for food or food purposes. (Applies to all Ornamentals)
Pansy	Anthraxnose		
Pansy	Betrytis blossom blight Phytophthora blight	Apply in early spring and early fall, drenching soil around plants as well as the foliage. Promptly destroy all infected plant parts.	
Peperomia	Cercospora leaf spot		
Philodendron	Dactylaria leaf spot Phytophthora leaf spot		
Platena	Entomosporium leaf spot		
Pisonia	Fusarium leaf spot		
Poinsettia	Sphaceloma scab		
Rhododendron	Cercospora leaf spot Dioscorea leaf spot Petal blight	Refer to azalea.	
Rose	Black spot Cercospora leaf spot Rust		
Schefflera	Alternaria blight		
Shrub, sumac	Cylindrosporium leaf spot		
Snapdragon	Rust		
Statice	Cercospora frog-eye		
Syngonium	Cephalosporium leaf spot		
Talep	Betrytis blight (fire)		
Venus flytrap	Anthraxnose		
Viburnum	Dewy mildew Ramularia leaf spot		
Walnut	Anthraxnose		Do not use treated walnuts for food or food purposes.
Zinnia	Alternaria leaf blight		

STORAGE AND DISPOSAL

STORAGE: Keep from freezing. Store in a cool, well-ventilated area, but not below 32°F. Do not allow to become overheated in storage. This may bring on chemical changes which will impair the fungicidal effectiveness of FORE fungicide. Keep container closed when not in use.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

CONTAINER DISPOSAL

Plastic Containers — Triple rinse (or equivalent). Then puncture and dispose of in a sanitary landfill, by incin-

eration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Dike and contain the spill. Transfer liquid and solid diking material to separate containers for recovery or disposal. Flush contaminated area with a large amount of water to a chemical or sanitary sewer containing a settling pit. Remove contaminated clothing and wash affected skin areas with soap and water. Wash clothing before reuse. Keep the solids out of the municipal sewer, all open bodies of water. Refer to Precautionary Statements.

FORE, LATRON and B-1956 are trademarks of Rohm and Haas Company.

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