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Base Reg. (5719)

Reason to Issue: To add grazing limitation for wheat.

Date of Draft: 9/30/85 (8) Supersedes Draft Dated: 7/16/85

EPA Reg. No. 3125-58

RESTRICTED USE PESTICIDE

Acute human oral, dermal, and inhalation toxicity.

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

BDI-SYSTON
5% GRANULAR
SYSTEMIC INSECTICIDE

NOT FOR HOME GARDEN USE

NOV 1 4 1985

Un.'c. Surgical and R. denticide Act, or amended, for the pesticide registered under EPA Reg. No. 3/25-59

5Z

FOR EFFECTIVE SYSTEMIC CROP PROTECTION

NET WEIGHT

POUNDS

DANGER POISON

KEEP OUT OF REACH OF CHILDREN (See Back Panel for Statements of Practical Treatment and Other Precautionary Statements) ACTIVE INGREDIENT:

0,0-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate

INERT INGREDIENTS: 957 1007

EPA Reg. No. 3125-58 EPA Est. 3125-IA-1

STOP - READ THE LABEL BEFORE USE

PELIGRO

PRECAUCION AL USUARIO: Si usted no puede leer o entender inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

(TO THE USER: If you cannot read or understand English, do not use this product until the label has been fully explained to you.)

MOBAY CHEMICAL CORPORATION
AGRICULTURAL CHEMICALS DIVISION
Box 4913, Kansas City, Missouri 64120

Note: Underlined letters in chemical nomenclature should be italicized when printed, not underlined.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its, labeling.

IMPORTANT: Read these entire Directions and Conditions of Sale before using DI-SYSTON 5% Granular.

CONDITIONS OF SALE: THE DIRECTIONS ON THIS LABEL WEPE DETERMINED THROUGH RESEARCH TO BE THE DIRECTIONS FOR CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED FOR A RANGE OF WEATHER CONDITIONS SIMILAR TO THOSE WEATHER CONDITIONS THAT ARE ORDINARY AND CUSTOMARY IN THE GEOGRAPHIC AREA WHERE THE PRODUCT IS USED. INSUFFICIENT CONTROL OF PESTS AND/OR INJURY TO THE CROP TO WHICH THE PRODUCT IS APPLIED MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL WEATHER, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO OTHER CROPS, ANIMALS, MAN, OR THE ENVIRONMENT. MOBAY OFFERS, AND THE BUYER ACCEPTS AND USES, THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL WEATHER, OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF MOBAY AND ARE, THEREFORE, THE RESPONSIBILITY OF THE BUYER.

DI-SYSTON 5% Granular systemic insecticide enters the plant through the root system. The insecticide when placed near the roots, is picked up and moves in the sap stream to all parts of the plant where it kills insects as they feed on the plant.

This formulation of DI-SYSTON 5% Granular is highly versatile and may be applied by various methods. It can be drilled in the furrow with seed, broadcast, or banded on each side of the seed furrow. Foliage broadcast application may be applied by ground or air equipment. Time and method of application and limits for use are discussed in detail for each specific crop under "Remarks" below.

As a preplant treatment for ornamental flowers, shrubs, and trees, apply granules evenly to seed bed and mix into soil; seeds or transplants are then placed in the normal manner. Established plants may be treated by distributing granules uniformly under foliage canopy. (Mixing the granules into top soil and watering will accelerate entry into the plant, as the chemical will leach into the root zone and be taken up by the root system.

RECOMMENDED APPLICATIONS

IMPORTANT: When used on cotton, sugar beets, tomatoes, beans, or lettuce at the maximum recommended rates under adverse conditions such as extremely cool or wet or extremely dry weather, DI-SYSTON systemic insecticide may cause some delay in emergence, stunting of seedlings, or reluction of stand. Such damage may be more pronounced in light, sandy soils. Plant injury may also occur or may be enhanced when certain pre-emergent herbicides are used in conjunction with DI-SYSTON.

	1	DOSAGE DI-SYSTON 5%	
CROP	INSECT	Granular	REMARKS
FIELD CR	OPS		
Alfalfa	Aphids Mite3	20 pounds per acre	Apply only one broadcast treatment but not within 28 days of grazing or cutting for forage. Make only one application per crop season.
Jlover	Aphids	20 pounds per acre	Apply by broadcast treatment as needed but not within 7 days of harvest or grazing. Allow a minimum of 28 days between applications.
Burley Oaca	Aphids Mutes	20 pounds per acre	Apply by drilling or broadcast at plant- ing time, or as a broadcast after emer- gence. Do not apply more than twice per season nor within 60 days of harvest for grain. Allow a minimum of 21 days between applications. Do not graze or cut for forage within 30 days of treatmen

Page 2 of 13

CROP	INSECT	DOSAGE DI-SYSTON 5% G	REMARKS .
	ROPS (Cont'd)	32 0101011 34 0	
Corn	Aphids Leafhoppers Mites Thrips	24 ounces per 1000 feet of row (for any row spacing*) or 20 pounds per acre (40 inch row spacing) Note: Do not apply to corn more than twice per season regardless of the method of application.	For control of these insects apply granule to the soil as a side-dress treatment or to the foliage by broadcasting into the whorl Do not apply DI-SYSTON 5% Granular within 40 days of harvesting for food, feed, or ensilage.
Cotton	Aphids Mites Thrips	14 to 24 ounces per 1000 feet of row (for any row spacing*) or 12 to 20 pounds per acre (40 inch row spacing)	At Planting: Place the granules in the see furrow or in a band on each side of the furrow. PATE CHART FOR PLANTING TIME APPLICATION Heavy Soils Medium Soils Light Soils 24 oz. 5% 20 oz 5% 14 oz. 5% Gran./1000 Gran./1000 Gran./1000 ft. of row ft. of row ft. of row 20 lbs. 5% 16 lbs. 5% 12 lbs. 5% Gran./acre Gran./acre Gran./acre Post-Plant: (Irrigated Cotton Only)
			If an additional treatment is necessary make one side-dress application or a single broadcast application over the foliage. Rates up to 40 pounds per acre can be applied to first squaring cotton (90 days before harvest) and rates up to 20 pounds per acre can be applied to within 28 days of harvest. Do not apply more than twice per season. Allow a minimum of 21 days between applications. Read "IMPORTANT" statement under "Recommended Applications" for additional information before use on this crop.

CROP	INSECT	DOSAGE DI-SYSTON 5% G	REMARKS
FIELD CROPS	(Cont'd)		
Peanuts	Aphids Leafhoppers Mites Thrips	22 to 44 ounces per 1000 feet of row (for any row spacing*) -or 20 to 4. pounds per acre (36 inch row spacing)	Place the granules in a band on each side of the seed furrow at planting, or as a side-dressing after plants are established Do not apply directly on the seed. Where necessary, granular may be applied in a band over the row or as a side-dressing at pegging time. Do not feed treated vines.
Rice	Leafhoppers	40 pounds per scre	Apply as a broadcast application at planting or prior to flooding. Do not apply more than twice per season nor with: 100 days of hervest. Do not use straw for forage, fodder, or bedding purposes.
Sorghum	Aphids	24 ounces per 1000 ft. of row (for any row spacing*) or 20 pounds per scre (40 inch row spacing)	Apply specified dosage by broadcasting in the whorl. Do not apply more than once percop season nor within 30 days of harvest for grain or 14 days of harvest for forage and fodder.
Soybeans	Thrips (except flower thrips) Mexican bean beetle	20 pounds per acre (36 inch row spacing)	Place the granules in a 4-inch band over the seed furrow behind the planter shoe and in front of the press wheel or in a band on each side of the seed furrow at planting time. Do not apply directly on the seed.
Sugar Beets	Aphids Leafhoppers Mites	18 ounces per 1000 ft of row (for any row spacing*) -or- 20 pounds per acre (30 inch row spacing)	Place the granules in the seed furrow 2 inches under the seed or in a band on each side of the seed furrow at planting; or apply to foliage and crown after emergence. Do not apply directly on the seed. Do not apply more than 3 times per season nor within 30 days of harvest. Allow a minimum of 21 days between applications. Read "IMPORTANT" statement under "Recommended Applications" for additional information before use on this crop.

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	, , , , , , , , , , , , , , , , , , ,	RECOMMENDED APPLICATIO	MS (Cont'd)
		DOSAGE DI-SYSTON 10%	
CROP	INSECT	Granular	REMARKS
Tobacco	Aphids Flee beetles	60 to 120 ounces per 1000 feet of row (for any row spacing*) -or- 40 to 80 pounds per acre (48 inch row spacing)	Apply in a 6- to 12-inch band over the row immediately before transplanting. Incorporate the granules by working the into the top 2 to 3 inches of soil. Se tobacco transplants into the band of treated soil.
	Southern Potato wireworm	40 to 80 pounds per acre	When applied in the above manner, DI-SYSTON 5% Granular will aid in control of this wireworm.
Wheat (Fall)	Hessian fly	20 pounds per acre	Apply by drilling or broadcast at planting time in the fall. Make only one application and do not graze or cut for forage within 75 days of treatment.
SEED FIELD	CROPS		
Soybeans	Aphids Leafhoppers Mites Thrips	24 ounces per 1000 feet of row (for any row spacing*) -or- 20 pounds per acre (40 inch row spacing)	Place the granules in a band on each side of the seed furrow at planting or as a side-dressing after plants are established. Do not pasture or use treated crop for feed, food, or forage. Do not apply directly to seed.

CRAR	INSECT	DOSAGE DI-SYSTOM 10%	REMARKS
CROP	IBSECT /	Granular	REMARKS
FRUIT Coffee (Puerto Rico Only)	Loaf miner	6 to 12 grams per foot of tree height	Distribute granules uniformly under the tree canopy. Do not apply more than twice per year. Make no more than one pre-harvest and one post-harvest application. Do not make the pre-harvest application within 90 days of harvest.
Pineapple	Mealybug	50 pounds per acre	Apply as a broadcast application, or topically by base leaf feeding after plants have developed root systems. Repeat as necessary but not more than twice per crop period nor within 60 days of harvest. When two treatments are used, do not ensile foliage less than one year after last application.
NON-BEARI	NG FRUIT		
Fruit Trees (apples, apricots cherries	Aphids Lace bug Leafhoppers Mites Thrips Whiteflies	1/2 to 5 pounds per tree of 8 ozs. per inch of trunk diameter	Spread granules uniformly from trunk to drip line on all sides. Work into soil and water thoroughly. The higher dosage is recommended for heavy organic or muck soils. For transplanting, equivalent quantities should be applied into planting hole. Do not apply to trees that will bear fruit during the current crop year.
Straw- berries (Propa- gating Plants Only)	Aphids Mites (except cyclamen mite)	52 to 104 ozs. per 1000 feet of row (for any row spacing*) - or - 40 to 80 pounds per acre (42 inch row spacing)	Apply by side-dressing on each side of the row or by broadcasting over the row as needed. Do not use fruit from treated plants for food purposes.
Pecans (South Central & South western States) (Note 1)		30 to 60 pounds per acre	Apply by treating 6-foot bands of soil on both sides of the trees. The bands should be located under the main drip area of the trees. Work the granules into the upper 2 to 3 inches of soil. On irrigated pecans, apply water as soon as possible after treatment. Make only 1 application per season. Early spring treatment is recommended. Do not harvest nuts within 80 days of treatment. Do not graze grass under treated trees. Do not mix this product with Phosalone.

DOSAGE Cont d				
CROP	INSECT	DI-SYSTON 5% G	REMARKS	
VEGETABLES Beans	Aphids Mexican bean beetle (larvae) Mites Thrips	18 to 38 ounces per 1000 feet of row (for any row spacing*) -or- 20 to 40 pounds per acre (30 inch row spacing) If grain drills or similar equipment are used which give narrow row spacing, do not exceed the 40-1b. per acre rate.	For snap or green lima beans, place the granules in a band on each side of the seed furrow at planting time only. For dry beans, apply as above at planting time or as a side-dressing on each side of the row after plants become established but not within 60 days of harvest. Do not apply directly on the seed. Do not apply more than once per season. Read "IMPORTANT" statement under "Recommended Applications" for additional information before use on this crop.	
Brussels Sprouts	Aphids Flea beetles Leafhoppers Mites Thrips	22 ounces per 1000 feet of row (for any row spacing*) -or- 20 pounds per acre (36 inch row	Place the granules in a band on each side of the seed furrow at planting or as a side-dressing after plants become established. Do not apply directly on the seed. Do not apply more than twic per season, nor within 30 days of harvest for Brussels sprouts, or 40 da of harvest for cauliflower. Allow a minimum of 21 days between application	
Cauliflower	Aphids Flea beetles Leafhoppers	spacing)		
Broccoli	Aphids Flea beetles Leafhoppers	22 ounces per 1000 feet of row (for any row spacing*) -or- 20 pounds per acre (36 inch row	Place the granules as a band on each side of the seed furrow at planting of as a side-dressing after plants become established. Do not apply directly of the seed. Do not apply more than one per season. Do not use within 14 day of harvest for broccoli or 42 days of harvest for cabbage.	
Cabbage	Aphids Flea Seetles	spacing)		
	Root aphid	34 ounces per 1000 ft. of row (for any row spacing*)		

		DOSAGE	
CROP	INSECT	DI-SYSTON 52 G	REMARKS
(Cont'd) Lettuce	Aphids Leafhoppers Mites Thrips	12 to 24 ozs. per 1000 ft. of row (for any row spacing*) -or- 20 to 40 pounds per acre (20 inch row spacing)	Spring or Summer Seeded Lettuce: Use the higher rate on heavy organic soils. Place the granules in a band on each side of the row at seeding time only. Do not apply directly on the seed. Do not apply to transplanted lettuce. Fall or Winter Seeded Lettuce: Apply as a side-dressing at thinning time. Do not apply within 60 days of harvest. Read "IMPORTANT" statement under "Recommended Applications" for additional information before use on this crop.
Peas	Aphids Leafhoppers	20 to 50 pounds per acre	Apply by drilling or broadcasting at planting time, or as a side-dress on each side of the row after emergence. Do not apply more than once per season nor within 50 days of harvest. Do not feed vines or hay within 65 days of treatment.
otatoes	Aphids Flea beetles (except tuber flea beetles) Leafhoppers Potato psyllid Southern potato wireworm Cclorado potato beetle (early season reduction)	46 to 70 ozs. per 1000 ft. or row (for any row spacing*) -or- 40 to 60 pounds per acre (38 inch row spacing)	ROW TREATMENTS Place the granules in the seed furrow or in a band on each side of the seed furrow at planting. An additional application may also be made as a side-dressing after plants become established. Do not make more than two applications per season nor apply within 75 days of harvest. Higher rate to be used in organic soils. Do not mix this product with Phosalone.
		60 to 80 pounds per acre	BROADCAST APPLICATION Apply specified dosage per acre as a pre-plant broadcast application. Work granules into soil to a depth of 2 to 3 inches using a disc or other suitable equipment. Plant crop in usual manner. A post emergence side-dress may also be made at rates of 46 to 70 ounces per 1000 feet of row (for any row spacing*), after the plants become established. Do not make more than two applications per season, nor apply within 75 days of harvest. Do not mix this product with Phosalone.

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vEGETABLES Spinach	(Cont'd) Aphids Leafhoppers Mites Thrips	12 ounces per 1000 ft. of row (for any row spacing*) -or- 20 pounds per acre (20 inch row spacing)	Place the granules in a band on each side of the seed furrow at planting time only. Do not apply directly on the seed.	
Tonatoes	Aphids Flea beetles Leafhoppers Leaf miners Mites Culorado : tato leetle (esrly season reduction)	24 to 70 ounces per 1000 feet of row (for any row spacing*) -or- 20 to 60 pounds per acre (38 inch row spacing)	Apply in a band on each side of the seed furrow at planting time. Do not apply directly on the seed. Where 2 treatments are required, use only 24 to 48 czs. per 1000 ft. of row, or 20 to 40 lbs. per acre, applied in a band on each side of the seed furrow at planting and as a side-dressing after plants become established. Allow a minimum of 2! days between applications. (Note: Florida Only - Rates up to 220 czs. per 1000 ft. of row, with a 72 inch row spacing may be applied to highly alkaline soils in a band on each side of the seed furrow at planting time only; or where 2 treatments are required, up to 110 czs. per 1000 ft. of row, with a 72 inch row spacing at planting time, and up to 110 czs. per 1000 ft. of row as a side-dressing after plants become established.) Do not apply within 30 days of harvest. Read "IMPORTANT" statement under "Recommended Applications" for additional information before use on this crop.	

ORNAMENTALS Flowers (Note 1)	Aphids Lace bug Leafhoppers Mites Thrips Whiteflies	32 ounces per 150 to 300 feet of row	Apply in a band on each side of the seed furrow or as a band over the row. Work into soil and water thoroughly. For treatment of Easter lilies and gladiolus, apply the specified dosage in the furrow over the bulbs after they are set but before covering with soil. Do not make in-furrow applications to garden lily bulbs. The higher dosage is recommended for heavy organic or muck soils.
Shrubs Trees Forest Plants (Note 1)	Aphids Birch leaf miner Camellia scale Elm leaf beetle European elm scale Holly leaf miner Lace bug Leafhoppers Mimosa webworm Mites Pine tip moth Soft scale (Coccus hesperidium) Tea scale Thrips Whiteflies	1/2 to 5 pounds per tree or 8 ounces per inch of trunk dismeter	Spread granules uniformly from trunk to drip line on all sides. Work into soil and water thoroughly. The higher dosage is recommended for heavy organic or muck soils. For transplanting equivalent quantities should be applied into planting hole or by dipping seedling in a puddling clay slurry made up of 2 parts by weight of DI-SYSTON 5% Granular in 4 to 9 parts by weight of clay.

Note 1: For use by commercial growers or professional applicators only.

*ON ROW CROPS WHERE ROW SPACING IS EXTREMELY NARROW, DO NOT PLACE TREATED ZONES (BAND OR FURROW) CLOSER TOGETHER THAN 6 INCHES.

RESTRICTIONS

Not for home garden use. In commercial topping of flowers by hand, clean gloves should be worn. Do not use on other crops used for food or forage. Use only according to label directions. Application at rates above those shown may result in illegal crop residues. Do not treat crops grown in the greenhouse.

Do not apply this product with a knapsack or other equipment that is placed on the user's body.

CROP ROTATION STATEMENT

Do not plant any food or feed crop in rotation after a field treatment with disulfoton unless it is a registered use for disulfoton.

RE-ENTRY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not allow reentry into treated fields within 24 hours of application unless appropriate protective clothing is worn. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

(The following may appear on supplemental labeling accompanying the product)
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. Oral warnings should include those statements found under the label heading "Precautionary Statements" and "Re-entry Statements" included on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given in there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: DANGER, area treated with DI-SYSTON 5% Granular on (date of application). Do not allow reentry into treated fields within 24 hours of application unless appropriate protective clothing is worn. If on skin, remove contaminated clothing and wash skin immediately with soap and warm water. If eyes are contaminated, wash with flowing water for at least 15 minutes. If swallowed, vomiting should be induced. (See Precautionary Statements on label).

STORAGE AND DISPOSAL

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

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

STÓRAGE AND DISPOSAL (Cont'd)

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed above. In spill or leak incidents, keep unauthorized people away. You may contact the Mobay Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Mobay Kansas City Emergency Response Telephone No. is 816-242-2582, or contact Chemtrec at 800-424-9300.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS



Poisonous if swallowed, inhaled, or absorbed through the skin. Rapidly absorbed through the skin. Do not get in eyes or on skin. Do not breathe dust. Wear protective clothing and cotton or natural rubber gloves. If cotton gloves are used, they must be laundered or discarded after each day's use. Do not wear the same gloves for other work. Rubber gloves should be washed with soap and water after each use.

When using DI-SYSTON 5% Granular insecticide in enclosed areas, wear a mask or respirator jointly approved by the Mining Enforcement and Safety Administration (formerly the U.S. Bureau of Mines) and by the National Institute for Occupational Safety and Health under the provisions of 30 CFR Part 11.

Do not contaminate feed or food. Keep out of reach of children. Keep all unprotected persons out of the operating area or vicinity. Wash hands, arms, and face thoroughly with soap and warm water before eating or smoking. Wash all contaminated clothing with soap and hot water before reuse.

SYMPTOMS OF POISONING: A sense of "tightness" in the chest. Sweating. Contracted pupils. Stomach pains. Vomiting and diarrhea.

STATEMENTS OF PRACTICAL TREATMENT

TREATMENT: In case of poisoning, call a physician immediately. Have patient lie down and keep quiet. If swallowed, vomiting should be induced. Administer water freely and induce vowiting by giving one dose (1/2 oz. or 15 ml.) of syrup of ipecac. If vomiting does not occur within 10 to 20 minutes, administer second dose. If syrup of ipecac is not available, induce vomiting by sticking finger down throat. Repeat until vomer fluid is clear. Never give anything by mouth to an unconscious person. Professional medical assistance should be secured immediately. If on skin, remove contaminated clothing and wash skin immediately with soap and warm water. If eyes are contaminated, wash with flowing water for at least 15 minutes.

STATEMENTS OF PRACTICAL TREATMENT (Cont'd)

TO PHYSICIAN:

ANTIDOTE - Administer atropine sulfate in large thetapeutic doses. Repeat as necessary to the point of tolerance. 2-PAM is also antidotal and may be administered in conjunction with atropine.

Compound inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves. Do not give morphine. Watch for pulmonary edems, which may develop in serious cases of poisoning even after 12 hours. At first sign of pulmonary edems, the patient should be placed in an oxygen tent and treated symptomatically.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not apply directly to water or wetlands. Drift and runoff from treated areas may be hazardous to fish in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or incorporate spills.

This pesticide is toxic to bees exposed to direct application. Applications should be timed to coincide with periods of minimum bee activity, usually between late evening and early morning.

DI-SYSTON is a Reg. TM of the Parent Company of Farbenfabriken Bayer GmbH, Leverkusen.